INDEX

	Page
Introduction	1
Governing Legal Principles	3
Actual Navigation on the Lake	10
Susceptibility of the Lake to Useful Navigation	20
Conclusion	31
Appendix 1: Proposed Findings of Fact and Conclusions of Law	35
Appendix 2	43
Appendix 3	60
Appendix 4	64
Appendix 5: Comments on and Corrections of the State of Utah's Summary of Evidence	65
Appendix 6: Contents of Defendant's Exhibit 3	76
Appendix 7: Index to Defendant's Exhibit 4	79
Appendix 8	follows p. 83

CITATIONS

Cases:

Barney v. *Keokuk*, 94 U.S. 324	4, 5
Brewer-Elliott Oil and Gas Co. v. *United States*, 260 U.S. 77	2, 7
Deseret Livestock Co. v. *State*, 110 Utah 239, 171 P.2d 401	2
Economy Light Co. v. *United States*, 256 U.S. 113	9
Harrison v. *Fite*, 148 Fed. 781	2, 8
In Re Garnett, 141 U.S. 1	6
Iowa-Wisconsin Bridge Co. v. *United States*, 84 F. Supp. 852	2
Martin v. *Waddell*, 16 Pet. 367	4
Moore v. *American Transportation Co.*, 24 How. 1	5
Oklahoma v. *Texas*, 258 U.S. 574	7, 8, 9
Philadelphia Light Co. v. *Stimson*, 223 U.S. 605	9
Pollard's Lessee v. *Hagan*, 3 How. 212	2, 3
Robinson v. *Thomas*, 75 Utah 446, 286 Pac. 625	2
Shively v. *Bowlby*, 152 U.S. 1	9

362-672—69——1

Cases—Continued Page

The Daniel Ball, 10 Wall. 557 ..... 5, 6, 7
The Propeller Genesee Chief, 12 How. 443 5
The Montello, 11 Wall. 411 5
The Robert W. Parsons, 191 U.S. 17 9
United States v. *Appalachian Power Co.*, 311 U.S. 377 9
United States v. *Holt Bank*, 270 U.S. 49 ..... 2, 7
United States v. *Oregon*, 295 U.S. 1 ..... 2, 6, 8, 9
United States v. *Utah*, 283 U.S. 64 ..... 2, 6, 7, 9

Statute:

33 U.S.C. 2.10–5(a) 5, 9

In the Supreme Court of the United States

OCTOBER TERM, 1969

No. 31, Original

STATE OF UTAH, PLAINTIFF

v.

UNITED STATES OF AMERICA

ON BILL OF COMPLAINT
(BEFORE THE SPECIAL MASTER ON REFERENCE)

BRIEF OF THE UNITED STATES WITH RESPECT TO THE NAVIGABILITY OF THE GREAT SALT LAKE

INTRODUCTION

The only question now before the Special Master is whether or not the Great Salt Lake is navigable. The State of Utah contends that it is; the United States contends that it is not. Should we prevail on this issue that would be an end of the case, since the sole basis of Utah's claim to the lands in dispute, whether now submerged or exposed, is that they were once part of the bed of a *navigable* body of water and, as such, passed to the State upon Utah's admission to the Union. On the other hand, if Utah prevails on the question of navigability, further proceedings will be necessary to determine other issues, notably whether

the State lost its original title by operation of the law of "reliction" as portions of the former lake bed became exposed.[1]

Two propositions set the framework for the consideration of the navigability of the Great Salt Lake. The first is that the burden of proof is on the proponent of navigability—here Utah. See *Harrison* v. *Fite*, 148 Fed. 781, 785 (C.A. 8); *Iowa-Wisconsin Bridge Company* v. *United States*, 84 F. Supp. 852, 867 (C. Cls.). The second proposition is that "[n]avigability, when asserted as the basis of a right arising under the Constitution of the United States, is necessarily a question of federal law to be determined according to the general rule recognized and applied in the federal courts." *United States* v. *Holt Bank*, 270 U.S. 49, 55–56; *Brewer-Elliott Oil and Gas Co.* v. *United States*, 260 U.S. 77, 87; *United States* v. *Utah*, 283 U.S. 64, 75; *United States* v. *Oregon*, 295 U.S. 1, 14. It follows that the decisions of the Supreme Court of Utah taking judicial notice of the navigability of Great Salt Lake,[2] cannot be deemed to have established the Lake's navigability for our purposes. The question is, rather, whether the State of Utah, in the recent proceedings before the Special Master, has succeeded in showing that Great Salt Lake is a navi-

[1] As we read Utah's brief (pp. 1–4), there is no dispute between the parties on this point. The State's insistence (Br. p. 2.) that navigability is a "preliminary" issue, not a "basic" one, is presumably no more than an assertion that it must prevail on this question.

[2] *Robinson* v. *Thomas*, 75 Utah 446, 286 Pac. 625; *Deseret Livestock Co.* v. *State*, 110 Utah 239, 171 P. 2d 401.

gable body of water according to the rules recognized and applied in federal courts.

We turn first to those governing legal standards, concluding, in sum, that navigability as a basis for a State claim to submerged lands requires a finding that the body of water was used, or at least useable, at statehood as a commercial highway. We then undertake a detailed canvas of the evidence presented at the hearing. The historical materials, we find, reveal very little actual navigation of the Lake and none of the relevant kind at the critical time. Finally, we deal with the suggestion that the Great Salt Lake was, and is, *potentially* an artery of commerce.

GOVERNING LEGAL PRINCIPLES

At the outset, it may be useful to restate how the issue of navigability arises in the case. Utah's claim to the original bed of the Great Salt Lake (whether now submerged or exposed) ultimately rests upon the proposition that these lands passed to the State upon its admission to the Union. This results, it is said, from the operation of the "equal footing" principle which, as construed in *Pollard's Lessee* v. *Hagan*, 3 How. 212, and subsequent cases, requires that the newly admitted States be accorded the same property interest in submerged lands as was enjoyed by the thirteen original States as successors to the rights of the British Crown. And so we are finally led to the English law which viewed the beds of the great navigable rivers of the realm as belonging to the sovereign, rather than to the riparian landowners.

The governing notion apparently was that the principal highways of water commerce—which in England are the tidal rivers—ought to be treated as public assets, immune from the claims of private landowners. That rationale is, of course, equally applicable in this country. It is merely an anomaly of our constitutional history that, here, the public interest in navigable waters, as such, is administered by the federal government (to which the Constitution delegates admiralty and maritime jurisdiction and power to regulate interstate and foreign commerce), while the public interest in excluding the riparian owners from the underlying lands is manifested in State custody of the beds (because the original States, rather than the Union, immediately succeeded to the sovereign prerogatives of the British Crown and never ceded their rights in the water bottoms to the national government, see *Martin* v. *Waddell*, 16 Pet. 367, 410, 416). The fact that, in the United States, one sovereign regulates navigation and another owns the beds does not suggest different tests as to what constitutes a "public" river. On the contrary, since the overriding reason for keeping the beds out of private ownership is to prevent interference with the free use of navigable waters as commercial highways, see *Barney* v. *Keokuk*, 94 U.S. 324, 338, one would suppose that a State claim to submerged lands should attach only with respect to the beds of rivers or lakes the waters of which are subject to the federal navigational servitude.

That would certainly be the rule if the English example had been followed strictly. For the common law conceded to the Crown only the beds of navigable *tidal* waters, which were of course arms of the sea subject to the jurisdiction of the Admiralty and arteries of foreign commerce. To be sure, this equation of navigability with tide-water was early found ill-suited to the geography of America and rejected, both as a restriction on the federal admiralty jurisdiction (see *The Propeller Genesee Chief*, 12 How. 443, 454–459), and as a test of navigability for property purposes as well (*Barney* v. *Keokuk*, *supra*, 94 U.S. at 337–338). But the single federal standard that seemed to emerge was, in the words of the *Genesee Chief*, waters "on which commerce is carried on between different states or nations."

In light of this history underlying State ownership of the beds of the navigable waters, the question arises whether the rule is operative with respect to lands under rivers or lakes which are not within the federal admiralty jurisdiction or subjected to federal regulation under the Commerce Clause because they do not form part of a navigable interstate or international commercial highway—and are, accordingly, not "navigable waters of the United States." See *The Daniel Ball*, 10 Wall. 557, 563; *The Montello*, 11 Wall. 411, 415; *Moore* v. *American Transportation Company*, 24 How. 1, 39; 33 U.S.C. 2.10–5(a). Although there is of course no constitutional obstacle to recognizing State ownership of the beds of wholly land-locked intrastate waters, confining the doctrine to channels of interstate

or foreign commerce would serve the advantages of a single uniform federal test of navigability which, in practice, would allow public ownership under all important water highways. If the matter were open, we might invoke that limitation here, since the Great Salt Lake has no navigable connection beyond Utah. However, because we read the opinions in *United States* v. *Utah, supra,* 283 U.S. at 75, and *United States* v. *Oregon, supra,* 295 U.S. at 14, as foreclosing the argument, at this juncture, we merely preserve the point in the event it seems appropriate to urge reconsideration of the *Utah* and *Oregon* decisions when the Special Master's report is before the Court.

We now turn to the test of navigability on the assumption that an interstate connection is *not* essential for present purposes. The classic definition of navigable waters occurs in *The Daniel Ball, supra,* 10 Wall. at 563:

> Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary conditions, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water. * * *

Although that was a case construing the Commerce Clause, the definition just quoted is almost invariably cited in both admiralty cases (*e.g., In re Garnett,* 141 U.S. 1, 15), and cases involving State title (*e.g., United States* v. *Utah, supra,* 283 U.S. at 76). Like Utah (see Br. 8–10), we accept the passage as generally stating the applicable law.

What *The Daniel Ball* teaches is that navigability in fact, in federal law, is more than ability to float a vessel. A body of water is navigable in fact only if, in its natural condition, it is useable as a "commercial highway." The last expression carries several relevant implications:

> That the movement is a purposeful aspect of the flow of goods or passengers from one point to another, rather than, say, the aimless cruising of pleasure boats or even the scheduled round trips of a sightseeing or excursion vessel;
>
> That the commerce involved is, at least potentially, of substantial volume and frequency;
>
> That the use of the body of water for transporting goods or people is practical, including, presumably, physical possibility and economic feasibility.

These characteristics have been listed as ingredients of navigability in all contexts. But, whatever the appropriateness of demanding so much to establish admiralty jurisdiction, or congressional power under the Commerce Clause, it is clear that these are the enduring criteria of navigability in connection with determining a State claim to the bed of an inland lake or river. Thus, a navigable body of water in this sense has been defined as a waterway which has "capacity for practical and beneficial use in commerce" (*Oklahoma* v. *Texas*, 258 U.S. 574, 591), or, more directly, as "a channel for useful commerce." *Brewer-Elliott Oil and Gas Co.* v. *United States, supra,* 260 U.S. at 86; *United States* v. *Holt Bank, supra,* 270 U.S. at 56; *United States* v. *Utah, supra,* 283 U.S. at 76. The matter is well summed up in the landmark opinion

of Judge Hook in *Harrison* v. *Fite*, 148 Fed. 781, 783 (C.A. 8), approvingly cited by the Supreme Court in several decisions (*e.g.*, *Oklahoma* v. *Texas*, *supra*, 258 U.S. at 591; *United States* v. *Oregon*, *supra*, 295 U.S. at 23):

> To meet the test of navigability as understood in the American law a water course should be susceptible of use for purposes of commerce or possess a capacity for valuable floatage in the transportation to market of the products of the country through which it runs. It should be of practical usefulness to the public as a public highway in its natural state and without the aid of artificial means. A theoretical or potential navigability, or one that is temporary, precarious, and unprofitable, is not sufficient. While the navigable quality of a water course need not be continuous, yet it should continue long enough to be useful and valuable in transportation; and the fluctuations should come regularly with the seasons, so that the period of navigability may be depended upon. Mere depth of water, without profitable utility, will not render a water course navigable in the legal sense, so as to subject it to public servitude, nor will the fact that it is sufficient for pleasure boating or to enable hunters or fishermen to float their skiffs or canoes. To be navigable, a water course must have a useful capacity as a public highway of transportation. * * *

It only remains to stress one aspect of the test of navigability which is unique to the State title context: that is the *time* when the water course must be navigable. The time is *not* the present, as it is for the pur-

pose of admiralty jurisdiction. See *The Robert W. Parsons,* 191 U.S. 17, 28. Nor may we follow the generous test applicable to the exercise of congressional powers under the Commerce Clause, which treats as subject to regulation waters which were once navigable but are no longer (*e.g., Economy Light Co.* v. *United States,* 256 U.S. 113, 123–124), or which only recently have become passable (*e.g., Philadelphia Light Co.* v. *Stimson,* 223 U.S. 605, 634–635), and, also, streams which are not now, and never have been, navigable, but may become so in the future by improvements (*e.g., U.S.* v. *Appalachian Power Co.,* 311 U.S. 377, 409; and see 33 U.S.C. 2.10–5). For the purpose of determining a State claim to water bottoms the inquiry as to navigability is limited to the date of the State's admission to the Union; all else is irrelevant. *Shively* v. *Bowlby,* 152 U.S. 1, 18, 26; *United States* v. *Utah, supra,* 283 U.S. at 75; *United States* v. *Oregon, supra,* 295 U.S. at 14; *Oklahoma* v. *Texas, supra,* 258 U.S. at 591, 594; see *United States* v. *Appalachian Power Co., supra,* 311 U.S. at 408.

An important corollary of the rule that navigability must be shown at Statehood, not at some future time, is that the water course should be judged in its natural state. Future improvements that would remove obstacles to commerce or otherwise improve navigability are not relevant.

This is not to say that actual use of the river or lake as an artery of commerce at the date of the State's admission is essential. As *United States* v. *Utah, supra,* 283 U.S. at 82, explained: "where con-

ditions of exploration and settlement explain the infrequency or limited nature of such use, the susceptibility to use as a highway of commerce may still be satisfactorily proved." Thus, one may judge navigability by assuming a natural development of the area and considering whether the stream or lake, given its geographic setting, its dimensions and direction, will likely become a commercial highway. But, the potential of a water course as an artery of commerce may be obviously lacking from the beginning, despite its ability to float a large vessel. And subsequent history will often be relevant in confirming that appraisal.

ACTUAL NAVIGATION ON THE LAKE

In an appendix to this brief (App. 2, *infra*, pp. 43–59)[3] we have detailed every known instance of navigation on the Great Salt Lake.[4] We submit that a careful analysis of this history shows that the Lake never served as a commercial highway, certainly not since Statehood. We turn to that demonstration.

The evidence relative to boats plying the Lake reveals uses in seven categories: (1) pleasure; (2) ex-

[3] An abbreviated, but complete, listing in tabular form follows the narrative. App. 3, *infra*, pp. 60–63.

[4] Two boats referred to in the evidence are not listed; these are the "Rosie Brown," built by Thomas G. Brown, and named for his daughter, and the "LaVon," built by T. G. Brown, the son of Thomas Brown. The "Rosie Brown" was used to "haul salt from beds somewhere along the [Bear] river to the railroad at Corrine"; the "LaVon," was "a motor launch capable of carrying 25 passengers at a time, and used for pleasure cruises and hunting trips." Both boats are omitted because they seem to have been used only on the Bear River. The evidence does not reveal when these boats were used. Ex. D–3, p. 270.

cursions; (3) the hauling of sheep and cattle; (4) the construction of railroad lines across the lake; (5) surveys, explorations, and scientific studies; (6) commercial trade and (7) miscellaneous. In addition, the evidence reveals only the existence, but not the use, of a number of boats, and these may be assigned to an eighth category, that of "use unknown." [5]

1. The first category, that of pleasure boats, contains the greatest number of vessels. Undoubtedly, such boats as may have been on the Lake and which are not referred to in the evidence introduced in this case would be rowboats, sailboats and gasoline launches falling into this category. And the boats only generally referred to—the forty yachts mentioned in Item 60, the unknown number of boats which participated in the regatta mentioned in Item 73—all of these appear to have been private craft used solely for recreation and pleasure.

It should here be noted that (with perhaps one exception mentioned later) the only boats using the Salt Lake County Boat Harbor pictured in Exhibit P–11, and occasionally referred to at the hearing, were pleasure boats. The harbor was not built until the 1930's and in 1949, only about ten years after its completion, was found to have been neglected, "and not satisfactory for the 50 boats moored there." Ex. D–4, Item 00, pp. 7 and 8. This finding was made by the United States Army Corps of Engineers, which at the direction of Congress was conducting a study to de-

[5] Appendix 4, *infra*, p. 64, is a table indicating into which category the defendant believes should be placed each of the instances listed in Appendices 3 and 4.

termine whether or not the Government should participate in a project to improve the harbor. The final recommendation of the Corps was that improvements should not be undertaken.

Ten years later the harbor was again inspected by an agent of the federal government, this time in connection with a proposal that Great Salt Lake be made a national monument. According to this report, conditions there had deteriorated (Ex. D–4, Item D, pp. 6 and 7):

> Located a mile or so east of Sunset Beach, this harbor is apparently operated by Salt Lake County. It is certainly the largest, and possibly the only, harbor on the lake developed for the use of private pleasure boats. The harbor consists of a small dredged channel with dilapidated boat shelters along one side. The silting in this channel causes a serious maintenance problem. At the time of our visit a scoop was in operation cleaning out muck clogging the channel entrance.
>
> The harbor facilities presented the same general appearance of decay noted elsewhere. About 30 boats, ranging from rowboats to large cabin cruisers, were tied up in the boat sheds. Some of the boats were complete wrecks. All showed the ravages of erosion caused by the high salt content of the Great Salt Lake waters. The boat houses and other structures are complete shacks, almost beyond repair. The only exception was the boat house belonging either to the U.S. Navy or Coast Guard.
>
> If this harbor is any indication, Great Salt Lake is not a popular boating area. Further

> evidence of this is the fact that no boat of any kind was seen on the lake during the entire study.

The lack of pleasure boats on the Lake was not a phenomenon confined to 1959; in 1902, in a geography book apparently designed to be used in the Utah public school system, the statement is made of Great Salt Lake that (Ex. D–3, p. 127):

> Though the air is very invigorating and healthful on account of the salt spray, there is very little sailing upon the lake because of the unpleasant effect of the salt which crystallizes upon the body and clothes in thick scales from every drop of water which strikes them. Salt water soon destroys leather and rubber and causes disagreeable cracks in the skin, when it is not washed off by fresh water. The waves are very heavy and roll lazily even in severe storms.

But these comments on the harbor are a digression: even were the harbor in excellent condition, and used by a fleet of 500 pleasure craft, that use for that purpose would not under federal law permit a determination that the Lake is navigable for the purposes of vesting in the State title to the bed thereof.

2. The second category is of boats used for excursions: thirteen boats devoted to this activity have been identified in the evidence. The excursion trips appear for the most part to have lasted from twenty minutes to three hours, but sometimes boats were hired for tours of longer duration.

Obviously, to be a highway of trade and travel, a body of water ought to lead somewhere, and lend itself to being used by traffic to get from one end to the

other. A boat which ventures forth on a 2,000 square mile body of water for twenty minutes, and then without having in the interim discharged freight or passengers, returns to the place from which it started, cannot be said to have been engaged in "useful commerce", or to have demonstrated the Lake's "useful capacity as a public highway of transportation." If the existence on a body of water of excursion boats, or any boats hired for pleasure, could be construed to establish the navigability of that body of water, then the Lake in the Public Garden in Boston, plied regularly in the summer by a fleet of swan boats, would be a navigable body of water, as would countless other small ponds in parks throughout the country.

3. The third category is of boats used to haul cattle and sheep. Nine such boats can be identified in the evidence; in every case save one where there is information on the subject, however, it appears that the boats used to haul the sheep and cattle were the property of the owner of the stock, and that the hauling was done, not by a carrier for the purpose of making money by the act of carriage, but by a person or organization whose business was ranching and for whom the carriage of the stock to the mainland from either Antelope or Fremont island was only one step in an operation not centering on the use of the Lake as a highway for trade and travel in their customary modes on water. In other words, the business of the boats was ranching, not carrying waterborne freight; the boats were sustained on the Lake from the proceeds of the ranching operation, not from their profits as carriers.

This may, perhaps, be deemed an unimportant distinction; it could be argued that whether a boat used to haul stock is owned by the rancher himself, or by some party whose business it is to haul stock, makes no difference. But, there is, we suggest a critical distinction. The actual situation is that the carriage described served the needs only of the limited number of people who owned ranching operations along the shores of the Lake (and, indeed, the evidence shows that, in the entire history of the Lake, the only ranching operations which have used boats have been those of four or five people or organizations [6]—who have used Fremont or Antelope Island for grazing their sheep or cattle). This, we submit, hardly demonstrates that the lake has a "practical usefulness to the public as a public highway."

What is true of the boats which were apparently owned by the ranchers themselves is also true of the one boat used to haul stock that was not owned by a rancher: this was Mr. Backman's boat which was used—and presumably especially hired for this—to carry sheep to Fremont Island for the owners of that island. One sheep boat for hire does not make an artery of commerce; especially if it was only hired by one person—the owner of Fremont Island—and was useful only in one activity—the hauling of sheep to and from that island.

[6] These are, on Fremont Island, the Millers (up to 1884) and the Wenners (from 1884 on); on Antelope Island, the Mormon Church, originally, then (apparently) White and Sons, and finally, the Island Improvement or Island Ranching Company, which, in 1967, sold its land to the State of Utah.

4. What has been said of the inability of the limited use of boats for hauling stock to show the "practical usefulness" of the Lake to the public as a commercial highway applies with even more force to the fleets of boats which twice came on the lake, not to engage in trade or travel, but to construct across its waters first, in 1902, a railroad trestle, and then in 1957, a solid landfill causeway. While on the lake, these vessels were not instruments of commerce in the customary modes of trade or travel on water; they were construction equipment. After their work was completed, the steamboats, tugboats and barges, aside from a few craft which continued to be used for regular inspection checks of the trestle and causeway, all left the lake, for there was no traffic or other activity on the lake requiring their presence.

5. The fifth category, which consists of boats used to explore the Lake, or of boats which once were or now are engaged in scientific study on its waters, no more are indicative or probative of the utility of the lake for trade or travel than are the Apollo expeditions to the moon proof of the existence today of interplanetary commerce.

6. The sixth category consists of boats which appear in fact to have used the lake as a highway for commerce in the customary mode of trade and travel on water.

There are seven such boats: the first was the "Timely Gull" (Item 7), which was on the lake from 1854 to 1858, and appears to have been used not only

to haul church cattle to and from Antelope Island, but also to carry and trade in cedar, salt, and slate flagging.

The next two boats, the "Pioneer" (Item 15) and the "Kate Connor" (Item 16) both belonged to General Patrick Connor, and were both used in 1867 and 1868 to transport railroad ties from the mountains south of the lake eighty-five miles to where the Union Pacific Railroad was being built on the north of the lake, "where there was no timber (nor, in fact, anything else)." Ex. P–8, p. 17. How long the "Pioneer" was thus used is not known (although the railroad, of course, was completed in 1869), nor is anything known of its ultimate fate. The "Kate Connor" was not a financial success. Ex. P–8, p. 17. Although there is a reference to the "Kate Connor's" having sunk with a load of ore in about 1871 (Ex. P–8, p. 18B; Ex. D–3; p. 192), the journal of Christopher Layton reveals that the boat was bought by him in 1872 and used for a number of years thereafter for hauling sheep to Antelope Island for the church. Ex. D–3, p. 69. The "Kate Connor," therefore, has either been confused with some other boat which did sink, or after sinking, was raised and restored to use. Like the "Pioneer," its end is unknown; Alfred Lambourne, on Gunnison Island in 1895, mused on a piece of wreckage cast up on the shore and used for firewood (Ex. D–3, p. 140):

> Perhaps the relic that fed our flames was a bit of the old *Pioneer,* or it may have come from the *Star of the West.* Maybe it was a piece

from the ribs of the *Kate Connor,* whose skeleton lay for several years at one of the river mouths; or it may have come from the Stanbury scow, the *Salicornia;* or from the *Pluribustah,* or other boat with equally *un*euphonious name.

The next use of the lake as a highway for trade or travel also involved the transportation of railroad ties to the site of the construction of the railroad. The ties, however, were not carried in a boat; rather, lashed together, the ties constituted a raft (Item 18 in our list of boats). Given its purpose, this raft of ties crossed the Lake only once, of course, and it was never followed by a second. Ex. D–3, p. 191.

This brings us to the most famous boat ever on the lake, the "City of Corinne" (Item 19). It was launched in June, 1871, and was intended to be used for carrying passengers and freight, but its life in this capacity was less than one year. By June 1872, it had been converted into an excursion boat. In 1881, it was moored permanently at Garfield Landing, and was used as a hotel.

The last two boats which were used to any extent for trade and travel were both used by the Miller family: The "Lady of the Lake" (Item 32) in the 1880's, in addition to hauling sheep to and from Fremont Island, was used for hauling ore, salt and cedar posts. Its use by the Millers ceased well before 1891. Another boat (Item 34) built and used by the Millers carried salt from various salt works around the lake to a railroad connection. The exact dates of this use are unknown; it was probably in the 1880's.

These seven boats comprise the lake's entire commercial fleet, and the first five, at least, were in use for purposes of trade and travel for very brief periods of time. Only one of them, the "City of Corinne" had regularly scheduled passenger and freight service across the lake, and this service lasted for less than a year.

7. The seventh category is of boats devoted to miscellaneous uses: the rowboat (Item 9) which took Brigham Young to Antelope Island in 1856, while the team "forded the water to the island"; the "Star of the West" (Item 15) which once carried a "cargo of Salt," and which another time was used to supply water to a party surveying the lake, it having "no other known claim to fame," (Ex. D–3, p. 187); the four boats (Item 61) which in 1935 searched for a plane downed on the lake, and one of which was thereafter given to the Salt Lake County Sheriff's office; the LCI used for hauling guano (Item 66), which is the one boat other than a pleasure boat which may have used the Salt Lake County Boat Harbor, and which is not included among the boats in category 6 because it is subject to the same objection against being considered as engaged in trade or travel as are the boats used for hauling stock; the boat (Item 69) used by John Clawson Silver as a "promotional and goodwill ambassador"; the barge (Item 70) used by Mr. Silver to haul salt crystals "not to sell" but just "for decoration and pleasure"; and the "crash boat" (Item 77) supposedly operated on the Lake by the Hill Air Force Base. Also included here are the boats

(Items 71 and 72) used by the Sanders Brine Shrimp Company for harvesting brine shrimp from the lake.

8. All that need be said of the boats in the last category is that the evidence discloses that they were on the lake, but reveals nothing about their uses.

Thus, the evidence shows that in the 145 years since the discovery of the lake, there have been on its surface but seven vessels unmistakably engaged in trade or travel in the customary mode of trade and travel on water. The trade conducted by these vessels was sporadic; their careers were short. The only one of these vessels to carry passengers and freight on a regular schedule was in service for less than a year. A correlation of the dates when these seven boats were on the lake with the graph (Ex. P–2) showing the levels of Great Salt Lake from 1850 to 1968 (see Appendix 8) reveals that all these boats were launched at a time when the level of the lake was much higher than it was on the date of statehood in 1896. Indeed, the evidence indicates that all commercial traffic on Great Salt Lake had *ceased* by 1888, well before Utah became a State, and during a period when the level of the lake was higher than it has ever again reached.

And not one true use of the lake as a highway for trade and travel has occurred *since* the date of statehood. On the basis of actual use for trade and travel, the lake obviously is not, and was not on the date of statehood, navigable as a matter of fact.

SUSCEPTIBILITY OF THE LAKE TO USEFUL NAVIGATION

No doubt sensitive that the actual record of navigation on the Great Salt Lake may well be deemed in-

sufficient, the State seeks to bolster its case by invoking the rule that, in some circumstances, navigability may be established by merely showing that at Statehood the water course was "susceptible of commercial navigation" (see Utah Br. 13). We now turn to that claim.

It is important to stress the limitations of the rule. As we have already noted, the feasibility of future artificial improvements to the water course—or indeed, the predictability of natural changes—is *not* to be taken into account in assessing navigability for the purpose of a State claim to submerged lands. The law is simply that actual navigation at Statehood need not be shown if the water course, in its then state, was susceptible of commercial navigation but was not yet so used because of prevailing "conditions of exploration and setlement." Applying that standard, we submit the Great Salt Lake does not qualify.

1. Indeed, since the Lake was discovered (1824 or 1825) more than 70 years before the date of Utah's admission to the Union (1896) and settlement of the area had largely occurred by that time, it is doubtful whether the "susceptibility" rule is appropriately invoked at all. Ever since 1850 there have been sizeable settlements near the Lake. Salt Lake City, of course, was the first, and in 1852 Stansbury remarked of it (Ex. D–3, p. 4):

> The founding, within the space of three years, of a large and flourishing community, upon a spot so remote from the bodes of man, so completely shut out by natural barriers from the rest of the world, so entirely unconnected by watercourses with either of the oceans that

> was the shores of this continent—a country offering no advantages of inland navigation or of foreign commerce, but, on the contrary, isolated by vast uninhabitable deserts, and only to be reached by long, painful, and often hazardous journeys by land—presents an anomaly so very peculiar, that it deserves more than a passing notice.

In 1856 there were over 77,000 people in the Territory of Utah (Ex. D–3, p. 24), most of them undoubtedly in the vicinity of Salt Lake City, and fifteen years later the hotels of Salt Lake City were accommodating 1,515 visitors (Ex. D–3, p. 25). By 1890 the total population of Utah was 207,905 (Ex. D–3, p. 29), presumably most of it centered then where it is now, in Salt Lake, Davis and Weber Counties, on the eastern side of the Lake (Ex. D–3, pp. 168 and 280)—which in 1960 had 558,539 residents (Ex. D–3, pp. 281 and 282).

In the circumstances, it is plain that the limited use of the Lake before Statehood cannot be attributed to the undeveloped character of the area. As the history of the Lake since 1896 sufficiently shows, time has not turned it into a useful commercial highway. The fact is that the Great Salt Lake was never "susceptible" of filling that role.

2. It is, undoubtedly, the physical situation of the Lake which is chiefly responsible for the incredibly insignificant use made of the Lake over the last 145 years. The Lake lies in a "vast, flat, sterile basin" (Ex. D–3, p. 165). It is a residue of an ancient sea, and occupies a shallow depression in the otherwise re-

markably flat plain which once was the bed of that sea (Ex. P–31, p. 27). It is the drain for a great area, the Lake itself having no outlet. When the surface of the Lake is at 4,195 feet above sea level, the maximum depth of the Lake is about 25 feet; (Ex. D–2) the *average* depth of the Lake, however, is much less. Most of the shore of the Lake has a slope of less than 1 foot in 1,000 feet (D–4, Item 00, p. 2).

Thus, all around that portion of this great flat basin covered by the waters of the Lake stretch huge expanses of smooth, flat, salt-impregnated lands not covered by the waters of the Lake. The map which accompanies the stipulation in this case, and which shows the "reliction lands", well illustrates the extent to which the flats separate the waters of the Lake from usable dry land. The flatness and shallowness of this closed basin (that is, a basin without an outlet) have a number of consequences, two of which (each being the corollary of the other) are to make the shores of the lake extraordinarily desolate, and access to the Lake extremely difficult. As Dale L. Morgan wrote, "Save only for the southeastern beaches at the base of the Oquirrhs, it [the lake] is everywhere bulwarked with mud morasses and salt marshes which have made is nearly inaccessible and have done much to preserve its atmosphere of desolate strangeness." Ex. D–3, p. 167.

There can be no question that the Lake has, in fact, preserved its desolate strangeness. The "bleak and naked shores, without a single tree to relieve the eye * * *" which Captain Stansbury saw in 1849 are

still as bleak and naked as ever. In 1861, Richard F. Burton, the famed world traveler, described the western side of the Lake as "a perfect desert—a salt and arid waste, of clay and sand, with the consistence of mortar when wet, which cannot boast of a single stream; even the springs are sometimes separated by 'jornadas' of seventy miles." Ex. D–3, p. 61. In 1959—almost 100 years later—a National Park Service reconnaissance study to determine the potentialities of Great Salt Lake as a national park or monument stated that "the entire western shoreline is a desolate inaccessible wasteland of salt flats." Ex. D–4, item D p. 4. A guidebook to the State of Utah, written in 1965, reports that "for fifty miles north of Salt Lake City, white mud flats and marshes of the Inland Sea stretch desolate and forbidding beneath the mighty wall of the Wasatch Range. The sea itself has retreated westward, as if exhausted from countless ages of beating against the impregnable mountain rampart; now it lies brooding in solitude, far from the pleasant lands that men prefer. Not many people come into intimate contact with Great Salt Lake, for it is too remote, too well protected by its shield of encircling mud and marshes." Ex. D–3, p. 165.

And, indeed, the map of the general areas of the lake introduced into evidence by the plaintiff—Ex. P–1—shows how well the lake's encircling bogs, marshes and flats fend off intruders. Except for Lakeside on the west shore of the lake—a spot inhabited by perhaps fifty people who maintain the tracks of the Southern Pacific Railway—there are no settlements or com-

munities of any kind immediately bordering on the lake. In fact—and again with the exception of the fifty-peopled Lakeside—there are absolutely no communities at all anywhere near the western and northern shores of the lake throughout all that vast area from Grantsville, which is about seven miles from the south shore of the lake, along the western and northern shores of the lake over to Brigham City, which is over twenty miles from the present waterline of the lake on its eastern shore. No settlements, communities, or towns of any kind appear on plaintiff's Exhibit 1; instead, what appears on the map for this area are a bombing and gunnery range, the Great Salt Lake Desert, a wildlife refuge, extensive salt flats, and an abandoned salt plant. Or, to put what the maps shows into the words of Dale L. Morgan: "Men have made themselves at home only along the southern and eastern shores of the lake. Except along the old route of the Central Pacific over the Promontory summit, and around the north shore, which was finally abandoned in 1942, and along the Lucin Cutoff, with its service points and sidings, the northern and western shores of the lake are almost completely uninhabited." (Ex. D–3, p. 168.)

But even along the southern and eastern shores of the lake, there are no settlements immediately adjacent to the water: all of the centers of habitation here are separated from the lake by from five to twenty miles of bogs, marshes and flats. Exhibit D–1, showing the southern portion of Antelope Island, and the shores of the lake near the old Saltair Resort, graphically

depicts the salt flats which are as characteristic of the eastern and southern shores of the lake as they are of the western; as an 1892 guidebook stated with respect to a beach at that time about six miles from Syracuse: "like the entire east shore, this place is too flat and the bottom too muddy for fine bathing." Ex. D–3, p. 114. The small communities of Hooper, Roy, Clearfield, Syracuse and Kaysville; the large communities of Brigham City, Logan, Ogden and Salt Lake City: all are from five to twenty miles from the salt water. (Ex. P–1; Ex. D–2; Ex. D–3; p. 169; Tr. p. 254.) Says the same 1892 guidebook: "The nearest point to the lake from Salt Lake City is about ten miles distant, but it is almost inaccessible on account of the boggy character of the ground." (Ex. D–3, p. 113.)

It is but one aspect—although in this case a very important aspect—of the general inaccessibility of the lake resulting from the flatness and gradual shelving of the basin in which it is located, that it is unusually difficult to get boats from dry land across the boggy marshes into floatable water. References to this difficulty abound in the literature on the lake, beginning with the Mormon settlers who in 1848 explored the lake in their skiff on wheels, the "Mud Hen." They found, after rowing down the Jordan River to the lake, that (Ex. D–3, p. 53):

> The Jordan suddenly spread out without leaving any channel that would float our boat. We stepped out and drew our boat four miles, water varying from one to four inches, bottom sandy, covered with two or three inches of slime or soft mud; we did not discover a living thing

> in the water; water fowl in great abundance. Got aboard and steered for the first island (Antelope) hauled our boat over a bar one half mile, and when one and a half or two miles off the island the water again shoaled so that our boat struck bottom.

All through the course of their journey, they were obliged to haul their boat one, two or three miles to get into the eight or so inches of water needed to float it (Ex. D–3, p. 54); and when finally they returned to Salt Lake City, they "got into shoal water and when within one and a half mile of land ran aground," upon which "each one took his gun and provision and walked to land." (*Ibid.*) After completing the trip, one of the members of the party, Brother Hambleton, "suggested, what we considered a very appropriate and characteristic name for the lake, *viz.*, 'the briny shallow' in contradistinction to the 'briny deep.' " Ex. D–3, p. 54.

Shallow water and the constant running aground of his yawl and skiff plagued Stansbury during his survey of the Lake in 1850. Approaching the Lake from the Jordan River, he found, as had the party on the "Mud Hen" before him, that the "channels became less defined and more shallow as we advanced" (Ex. D–3, p. 7.) "We were therefore obliged to unload the boat entirely * * *. After six hours of severe labour, we at length succeeded in reaching water that would float our little craft * * *." (*Ibid.*) Later "a line of soundings was run until midway, when the boat grounded" (Ex. D–3, p. 9). "The skiff was sent ahead with an officer, but it was soon left on

the flat, and the party waded through soft mud and water to the shore" (Ex. D–3, p. 9). "Starting from the springs with the boats, we attempted to make our way to the point where the eastern range seemed to terminate; but the water was so shallow that it was impracticable. After many fruitless attempts, the boat was brought as near the shore as possible, part of the baggage loaded into the skiff and pushed toward the land. It was impossible, however, to bring even this light barque nearer than within a quarter of a mile of the beach, and the luggage was transported to shore on our shoulders." (Ex. D–3, p. 12). "Moved again today, with the intention of encamping at the head of this arm of the lake, but the water became so shallow that not even the skiff would float, and we had to resort to the usual process of transporting beds and baggage on our backs to the shore." (Ex. D–3, p. 14.) "Anchoring our boat to keep her from drifting off, we waded some half-mile to the shore, and proceeded nearly three miles inland on our bare feet, over a sandy flat, and plunged through thick, oozy mud nearly knee-deep until we reached the growth of reeds we had seen from the boat." (Ex. D–3, p. 16).

Further to catalogue here the instances supporting Stansbury's statement that he was "continually baffled by shoals, which could not be seen until the boat grounded upon them" (Ex. D–3, p. 21), is not necessary; suffice it to conclude with Stansbury's remark, when a portion of his party using the skiff was for a time lost because of a storm, "The loss of the skiff is severely felt the nature of the shore being such that

the large boat, when loaded, cannot, in many places, approach within two or three miles of the land, and the lighter vessel is therefore indispensable." (Ex. D–3, p. 19).

And again, a hundred years later, the situation was still the same. At a public hearing held in Salt Lake City on July 10, 1946, to consider the advisability of providing a harbor for light draft vessels on Great Salt Lake, Dr. Thomas C. Adams said (Ex. D–4, Item QQ, p. 15):

> The particular needs of boat operators are for deep water, protected anchorage and tying space of ample size, and with utilities and services customarily required at small harbors. On Great Salt Lake they need, in effect, access to the Lake which in its natural stage is surrounded insofar as boat operation is concerned with an almost impenetrable barrier consisting of broad continuous belt, a very gently sloping, soft, sandy beach and adjoining shelves. Boats of any consequence cannot be operated, cannot be maintained or outfitted, or even placed in the water under such circumstances.

Dr. Adams' testimony is of particular significance because of his special knowledge of the Lake; Dale L. Morgan, in 1946, described him as "an engineer long concerned with the lake and as commodore of the Great Salt Lake Yacht Club [he] has an unequaled fund of information about the lake which he has been at pains to place at my disposal." (Ex. D–3, p. 214.)

Another consequence of the physical situation of the Lake—its being in a closed basin, without an outlet—

is that the level of the Lake is subject to marked fluctuation. (Ex. D–3, pp. 274 to 278). And, since the basin in which the Lake is located is so flat, the fluctuations in the level of the Lake result in the covering or uncovering of large areas of lands. This condition further thwarts use of the Lake. An example of this is what happened after the reconstituted Great Salt Lake Yacht Club started to use the pier at Saltair in the late 1920's (Ex. D–3, p. 211):

> But that deadly lake level, which so often had disastrously intervened upon boating activities, either by rising to flood shore facilities or by so far withdrawing from them as to render them useless, once again began its assault upon the enthusiasm for yachting. The facilities at Saltair, between 1928 and 1935, became increasingly less satisfactory as the lake shrank upon itself. It was difficult to reach the boats, for the increasing shallowness of the water necessitated anchoring farther and farther out from the pavilion. And even when the water was deep enough to allow the boats to come to the pier, there was not protection from waves and storms.

In fine: the shallowness of the Lake, the difficulty of access to it, the great distances from the far water line of the Lake to depths capable of floating a boat, the inhospitable nature of the great bogs, marshes and salt flats surrounding the Lake, the desolateness of the immediate environs of the Lake, are physical features of the lake which negative its susceptibility to use as a highway of commerce; these physical features coupled with the facts that there are no com-

munities along the shores of the Lake, although the Lake is within twenty miles to half the population of Utah, and that in the 145 years that people have been living near the Lake, it has been but sparsely used, there having been no true commercial use of the Lake after the date of Statehood, nor to any marked extent for twenty-five years prior to the date of Statehood· all this compels the conclusion that the Lake, as a matter of fact, was not navigable at the time of the admission of Utah into the Union.

CONCLUSION

Great Salt Lake is, as the State remarks, one of the largest bodies of water in the Western Hemisphere (Br. p. 52). An outsider, seeing on a map of the United States a large patch of blue second only to the Great Lakes, would naturally impute to the area the activities customarily associated with bodies of water of this size: substantial cities which are centers of commerce whose vessels engage in intensive trade with each other by regularly plying the waters of this large lake. He would of course be wrong. The inutility, the foresakenness, of the Lake, and its commercial irrelevance to the area in which it is situated, have long been known to the local inhabitants who have observed it over the years. We need only cite guides to Utah prepared in the 1870's and 1880's, which, in referring to the "General Garfield," consistently point out that "this boat is used chiefly for excursions, there being no business to justify Great Salt Lake navigation" (Ex. D–3, pp. 75 (1879), 88 (1884); 102 (1888), and 107 (1888).

362–672—69——3

The matter is well summed up by Dr. Thomas C. Adams (whose particular qualifications to express a view on the subject we have already discussed) in testimony before the Senate Subcommittee on Public Lands in 1965 (Ex. P–31, p. 141):

> The navigability of the lake is obviously a matter for serious question. The lake is not now nor has it ever been a channel of commerce. On three historical occasions the water level has become so low due to natural causes that the prevailing belief was that the lake would dry. The only attempt, many years ago, to pursue regular commerce was shortlived and commercially not successful. Other operations of craft have been in the nature of desultory recreational boat with small craft transportation of livestock to and from summer ranges in some high-water years, or a few operations of floating construction equipment which might equally have been conducted in a swamp. The shores of the lake have rarely been usable for boat landings, no usable piers now exist, and the only attempt to construct and operate a public harbor of refuge has been abandoned. * * * The State of Utah has been completely unmindful about navigability of the lake, contributing in no way to this by regulation or public works and often proposing to do things or allowing others to do things which seriously impair the physical navigability of the lake.

As Dale L. Morgan's book on Great Salt Lake puts it: "The lake has never been hospitable to commercial boats * * *," and "has had only the most negligible of influences in the economy of its hinterland" (Ex.

D–3, pp. 173 and 213). This is what the evidence presented in the hearing in this case bears out—both the positive evidence as to the difficulty of use, and the negative evidence as to actual use.

The United States urges the Special Master to find the Great Salt Lake is not navigable and to adopt the proposed Findings of Fact and Conclusions of Law appended hereto.

Respectfully submitted.

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APPENDIX 1

Proposed Findings of Fact and Conclusions of Law

FINDINGS OF FACT

1. The State of Utah was admitted into the Union on January 4, 1896 [29 Stat. 876].

2. Great Salt Lake is a nontidal body of water entirely within the State of Utah. [Exs. P–1, P–2, P–3, D–4, Item 00, p. 3.]

3. The Bear, Weber, and Jordan Rivers flow into Great Salt Lake. The Weber and Jordan Rivers are entirely within the State of Utah; the Bear River originates in Utah, but flows through Wyoming and Idaho before reaching Great Salt Lake. [Exs. P–1, P–6, P–7, P–32, p. 33.]

4. Great Salt Lake has no outlet. Within historic times, it has had a maximum length of approximately 77 miles, a maximum width of approximately 32.5 miles, and a maximum depth of about 30 feet. [Exs. P–1, P–2, P–3, P–4, P–5.]

5. The Lake occupies a flat, relatively shallow basin in the area known as the Great Basin. It is bordered on the east by the Wasatch Mountains, and on the west by the Great Salt Lake Desert. The Oquirrh Mountains are located on the south and several small mountains are situated on the north. [Exs. P–1, D–4, Item 00, p. 2.]

6. The shore of the Lake has a slope of less than 1 foot in 1,000 feet. Except for an area at the southeastern shore of the Lake, at the base of the Oquirrah Mountains, the Lake is surrounded by flat stretches of

salt marshes and bogs, sometimes several miles in width. [Exs. P–1, D–3, p. 167, D–4, Item QQ, p. 15.]

7. Settlement in the vicinity of the Lake began in about 1847; the area on the eastern shore and within twenty miles of the Lake has always been the most populated portion of the State; in 1960, the number of persons in Davis County, Salt Lake City and Ogden, all of which areas are within twenty miles of the Lake, was approximately 325,000, and comprised almost half of the population of the State of Utah. [Ex. D–3, pp. 4, 168, 169, 280, 281, 282.]

8. Except for Lakeside on the west shore of the Lake, which has a population of about 50 people who maintain the tracks of the Southern Pacific Railway, there are no communities immediately bordering the Lake. On the eastern and southern shores of the Lake, there are no communities nearer than four miles to the waters of the Lake; on the western and northern shores, except for Lakeside, there are no communities anywhere near the Lake within the State of Utah. [Ex. P–1, Tr. 253.]

9. The Lake is physically capable of supporting large boats, barges and similar craft currently in general use on bodies of water other than Great Salt Lake. [Tr. 202–208.]

10. A total of forty boats can be identified as having been on the waters of Great Salt Lake from 1824 until the admission of Utah into the Union in 1896.

11. Exclusive of craft used to construct or maintain the railroad across the Lake, approximately fifty craft can be identified as having been on Great Salt Lake since the date of Utah's admission into the Union.

12. The activities engaged in by the vessels known to have been on the Lake since 1824 include: (1) transporting passengers, ore, fence posts, railroad ties

and salt; (2) hauling livestock to and from Antelope and Fremont Islands as part of the operations of a ranch; (3) carrying guano as part of a company operation from Gunnison and Bird Islands to the mainland; (4) the harvesting of brine shrimp; (5) the construction and maintenance of railroad lines across the lake; (6) excursions; (7) the exploration and scientific study of the Lake; (8) private recreation and pleasure; and (9) rescue operations.

13. In the total history of the Lake, only seven boats can be identified as having engaged in the activity of commercially transporting passengers, ore, fence posts, railroad ties and salt. Only one of these vessels, the *City of Corinne*, engaged in regularly scheduled freight and passenger service. It began these operations in June 1871 and terminated them in June, 1872. One of these "vessels," a raft of railroad ties, had been on the Lake one time only, in 1869. All of these boats had been used on the Lake and had ceased operations prior to the admission of Utah into the Union, and five of these boats had either been wrecked or had not engaged in the activity of carrying passengers, ore, fence posts, railroad ties and salt for at least twenty-five years prior to the admission of the State of Utah into the Union in 1896.

14. The only dock ever along the Lake available for use by the general public was the Salt Lake County Yacht Harbor, which was completed in 1939 and was no longer significantly used in 1960. [Ex. D–4, Item C, p. 1.]

15. At no time since 1824 did or could vessels on the Great Salt Lake travel by water from the Lake up any of its affluents to any place outside of the State of Utah. [Ex. P–32, p. 33.]

CONCLUSIONS OF LAW

1. A State upon its admission into the Union acquires by virtue of its sovereignty title to the beds of all the navigable bodies of water within its borders.

2. In any proceeding involving the question of the navigability of a body of water, the burden of proof is always on the proponent of navigability.

3. Navigability, when asserted by a State as the basis of its title to lands underlying bodies of water, is necessarily a question of federal law to be determined according to the general rule recognized and applied in federal courts.

4. Navigability under federal law, when asserted by a State as the basis of its title to lands underlying bodies of water, must be determined as of the date of the admission of the State into the Union.

5. To be navigable under federal law, a body of water must constitute a highway of commerce over which trade and travel is or may be carried on in the customary modes of trade and travel on water. Mere depth or expanse of water, without profitable utility, will not render a water course navigable in the legal sense.

6. The commerce which must be shown to exist or to be capable of existing on a body of water in order for that body of water to be deemed a navigable water for the purpose of vesting in the State title to its bed must be practical, useful and beneficial to the public. The fact that it is used for pleasure boating, or to enable fisherman to float their boats, is not sufficient. A theoretical or potential use for commerce, or one that is temporary, precarious, and unprofitable, is not sufficient.

7. In determining the navigability of a body of water in an area which was populous and had been

long settled at the time of the admission of the State in which it is located into the Union, the actual use or nonuse of that body of water as of the date of Statehood will be deemed most persuasive.

8. The use of boats by the owners of Fremont and Antelope Islands in Great Salt Lake to carry sheep and cattle back and forth from their island grazing fields to the mainland in connection with their business operation, as well as the use of such boats to carry supplies to employees of these islands, where such activity was carried on on behalf of not more than five people or organizations, cannot be deemed to show the utility for commerce to the general public of the waters of Great Salt Lake.

9. The hauling of guano from Gunnison and Bird Islands in Great Salt Lake cannot be deemed to show the utility of the waters of Great Salt Lake to the general public, where nothing is known as to the date or the extent of the guano hauling operation on Gunnison Island, and it appears that only one boat was used, fifty years after Statehood, and then for a period of not more than nine years, in hauling the guano from Bird Island.

10. The use of boats for harvesting shrimp from the Lake is not trade and travel on water in the customary modes of trade and travel on water.

11. The use of boats for the construction and maintenance of a railroad across the Great Salt Lake does not constitute trade and travel on water in the customary modes of trade and travel on water.

12. The use of boats to take persons on pleasure excursions of the Lake, where such excursions are for the most part from twenty minutes to four hours in duration, the boats then returning to the point whence they had departed, without having discharged any passengers on the way, is not trade and travel on

water in the customary modes of trade and travel on water.

13. The use of boats for the exploration and scientific study of Great Salt Lake does not constitute trade and travel on water in the customary modes of trade and travel on water.

14. The use of boats for recreational and pleasure sailing on the Great Salt Lake does not constitute trade and travel on water in the customary modes of trade and travel on water.

15. The use of boats for police patrol activities and rescue operations does not constitute trade and travel on water in the customary modes of trade and travel on water.

16. A showing that in the last 145 years, only seven boats on Great Salt Lake have been devoted to the hauling of passengers and freight, only one of which operated on a regular schedule (such operation not lasting more than one year); that of the seven boats, five were either no longer in existence or no longer carrying passengers and freight at least twenty-five years prior to Statehood, while either the existence or activities of the other two boats at the date of Statehood is unknown; that all seven of these boats were operating on the Lake at a time when the level of the Lake was much higher than it was at the date of Statehood, and much higher than it has ever been since again, is not sufficient to establish that Great Salt Lake was, at the time of the admission of Utah into the Union on January 4, 1896, a highway of commerce over which trade and travel were or could have been carried on in the customary modes of trade and travel on water.

17. A showing that after Statehood, there were no boats at all engaged in the carrying of passengers and freight, even though the population in the area con-

tinued to increase; that such uses as were made of the Lake after Statehood were extremely limited in scope, and of no commercial importance or consequence to the general public living in the vicinity of the Lake; that there never was more than one harbor on the Lake accessible to the public, which harbor was in use only after about 1935, and was never used by any vessel carrying passengers or freight from one part of the Lake to another, save for a guano boat, if that be deemed an exception, and which harbor is not now in use; that the Lake is surrounded by extensive marshes, bogs and flats which make access to it difficult; that the shores and bed of the Lake generally have a slope of less than one foot in a thousand feet, a condition which makes the launching of craft on the Lake difficult; that with the exception of the railroad settlement at Lakeside, which has a population of about 50 people, there are no communities immediately on the shores of the Lake, nor within at least four or five miles of the short of the Lake; such a showing is sufficient to warrant the conclusion that Great Salt Lake's susceptibility to use as a highway of commerce is too conjectural and hypothetical to establish its navigability for the purpose of vesting to the State title to the bed thereof.

18. Great Salt Lake was not on the date of Utah's admission into the Union navigable under the laws of the United States, and title to the bed of the Lake, therefore, did not on January 4, 1896, vest in the State of Utah, but remained in the United States.

19. The lands conveyed to the State of Utah on June 15, 1967, pursuant to the Act of June 3, 1966 (80 Stat. 192), include all of the lands below the meander line of Great Salt Lake as depicted on the map attached to the Stipulation filed by the parties in

this case, subject to the reservations and conditions set forth in the Act of June 3, 1966, *supra*.

20. The State of Utah having had no title to the bed of Great Salt Lake prior to the conveyance thereof to the State by the United States on June 15, 1967, is required, in order to retain title thereto in accordance with the Act of June 3, 1966, *supra*, to pay to the United States within two years from the date of the decree herein the fair market value of the entire bed of the Great Salt Lake below the meander line of that Lake, as that value shall be determined by the Secretary of the Interior as of the date of the decree herein.

APPENDIX 2

1. The first boat ever on the Lake[1] was the bull boat (a shallow draft tub-shaped boat made of buffalo skins) of Jim Bridger, to whom the credit for discovering the Lake is usually given. The traditional story is that Bridger was one of a party of trappers who, while travelling along the Bear River, began to speculate as to the course and destination of that stream. A wager was made, and Bridger, the youngest member of the crowd, was chosen to learn the answers. This was either late in 1824, or early in 1825. Bridger sailed down the stream and in due time reached Bear River Bay, where, after tasting the water, and spitting it out, he concluded that he had reached the shores of the Pacific Ocean. Ex. P–8, p. 18A; Ex. D–3, pp. 252 and 254.

2. In 1826 James Clyman and three companions "searching for beaver skins" circumnavigated the Lake in bullboats. There is no evidence that beaver skins were ever found, or that the Lake was ever used by trappers for the transportation of pelts. Ex. P–8, p. 18A; Ex. D–3, pp. 32, 251 and 254.

3. In 1843, the explorer John B. Fremont, in the company of Kit Carson and several others, sailed in an eighteen foot long "frail batteau of gumcloth distended with air, and with pasted seams" to the island in Great Salt Lake which now bears his name. Ex. P–8, p. 1; Ex. D–3, pp. 93, 252 and 254.

4. The first vessel put on the Lake by the Mormon

[1] There is no authentic record of the Indians ever having placed any boats on the Lake. Cf. Ex. D–3, p. 12.

settlers of the Great Salt Lake Valley was the "Mud Hen," which, in 1848, at the direction of Brigham Young, carried Albert Carrington and others on a two week exploring trip of the Great Salt Lake and its islands. The "Mud Hen" was a skiff on wheels, made of five fir planks. It was 15 feet 4 inches long and 4 feet 4 inches wide. Ex. P–8, p. 18A; Ex. D–3, pp. 53, 54 and 180.

5. In the spring of 1850, Captain Howard Stansbury of the U.S. Army Topological Survey Corps launched on the Great Salt Lake a yawl which had been built during the preceding winter, and in this yawl he and his company made the first accurate survey of the Lake. The yawl was named "Salicornia" or "Flower of Salt Lake" by the exploring party, but was generally referred to only as "The Sally." Ex. P–8, p. 18A; Ex. D–3, pp. 5, 8, 22, 180 and 261.

6. Along with "The Sally," Captain Stansbury used during his survey of the Lake in 1850 a small skiff. Ex. P–8, p. 18A; Ex. D–3, pp. 8 and 22.

7. On January 30, 1854, Brigham Young launched his boat, "The Timely Gull." It was 45 feet long, and although designed for a stern wheel to be propelled by horses working a treadmill, it was in fact always propelled by wind and sail. The boat was used primarily to carry church cattle to Antelope Island, but it was also used to transport cedar wood, salt and flagging, as well as for pleasure excursions. The boat was wrecked by a gale in 1858. Ex. P–8, pp. 2 and 18A; Ex. D–3, pp. 24, 40, 180, 182, 183, 229 and 272.

8. A notice published in the "Deseret News" on May 9, 1855, by one J. Cowdy announced that "the sail boat 'Deseret' is now ready to take parties out on the water, for pleasure excursions, either on Jordan or Salt Lake on reasonable terms * * *." Ex. P–8, p. 2.

9. When Brigham Young visited Antelope Island in 1856, he was taken there from the shore of the Lake in a rowboat used by Joseph Toronto and Peter O. Hansen "while the teams forded it." Ex. D–3, pp. 38 and 229.

10. In 1865, David L. Davis, who was originally from Wales and had arrived in Salt Lake City the year before, was sailing on the Great Salt Lake in "the brave sloop 'Eureka,' which was among the first pleasure craft on the Great Salt Lake * * *," and was the first of many pleasure craft used by "Captain" Davis during the following 50 years. The "Eureka" was 19 feet long with a six foot beam, and was on the Lake for about 8 or 10 years after 1865. It was engaged by the United States Geological Survey in 1869 for use in surveying the lake. Sailing was Captain Davis' hobby and recreation—he was for many years the "Captain" of the Salt Lake Yacht Club, which had for its object "the advancement of the general interest in aquatic sports"; his trade, in which he had been engaged since he was 14 years old, was that of a merchant. Ex. P–8, pp. 20, 23B, 23D, 24, 25 and 27.

11. For a number of years in the 1860's there was on the Lake the "lonesome pleasure yacht" of the Walker Brothers, who were merchants in Salt Lake City. Little is known about this boat, except that it was built by Gammon Hayward, and was a sailboat, "designed purely for pleasure purposes." Ex. P–8, p. 18A; Ex. D–3, pp. 75, 102, 188 and 209.

12. In September, 1867, Elbert Eastam and Ben Hampton, "having built a yacht at Bear River bridge, sailed down Bear River to G.S. Lake, 75 miles, thence up the Jordan River to G.S.L. City, making the journey in two days." Nothing else is known about this yacht. Ex. D–3, p. 57.

13. On April 14, 1867, John B. Meredith arrived near the bridge on the Jordan River, with the schooner "Star of the West," having a cargo of salt from Great Salt Lake, "he claiming it was the first voyage up the river from the lake, thus proving the river navigable." There is no record of this boat's ever having carried another cargo of salt. In June, 1868, the boat was used to supply water to a survey party headed by one F. C. Hodges, and in the course of this enterprise was swept by a gale onto some rocks, where it was broken. There is no evidence that it was ever floated again. Ex. P–8, p. 18A; Ex. D–3, pp. 56, 140 and 189.

14. On March 7, 1869, David L. Davis and one James Glade "went down to the river in W. D. Williams' boat." There is no evidence as to what kind of boat this was, or what it was used for. Ex. D–8, p. 20.

15. As the Union Pacific and Central Pacific Railroads were extended toward each other in the race to complete the transcontinental railroad (the driving of the Golden Spike joining the two halves of the continent took place at Promontory, immediately north of Great Salt Lake, on May 10, 1869), "there was a boom in the market for lumber, and in its wake Great Salt Lake for the first time began to commend itself for commercial navigation." in 1867 or 1868, General Patrick Connor, who had come to Utah with the United States Army to police the State, and had decided to stay, launched on the Lake the "Pioneer," a flat-bottomed sail boat used for carrying railroad ties. How long it was in use is unknown, but its hulk was eventually abandoned at the mouth of the Jordan River. Ex. P–8, p. 23C; Ex. D–3, pp. 140, 190.

16. Apparently General Connor had a contract with the Union Pacific Railroad to supply it with ties. For this purpose, on December 11, 1868, he launched on the Lake its first steamboat: the "Kate Connor,"

named for his daughter. The boat was a side wheeler 55 feet long, and with a beam of 18 feet. It was built by Gammon Hayward, and was used for carrying railroad ties and telegraph poles to Promontory. The boat was not a financial success. Although most of the writers who mention the boat say that it sank in 1871, the boat actually was purchased in 1872 by Christopher Layton, and thereafter used for a number of years to haul sheep to and from Antelope Island (apparently for the Mormon church). Ex. P–8, pp. 17, 18A, and 23C; Ex. D–3, pp. 69, 75, 190, 192, 245 and 254.

17. General Connor also put on the Lake in 1869 the "Pluribustah," a schooner of 100 tons burthen. Almost nothing is known about this vessel. Ex. P–8, p. 18B; Ex. D–3, pp. 75, 102, 190 and 219.

18. In order to supply the demand for railroad ties needed for the construction of the Utah Central Railroad (which connected with the Union Pacific at Ogden) timber was cut and hewed in Dry and Pine Canyons in the winter of 1868–9, hauled to the Lake, and there built into a large raft, 300 feet long by 16 feet wide, which was then poled to the vicinity of Farmington, where it was dismantled, and the ties carried to the construction site. Ex. P–8, p. 2B; Ex. D–3, p. 191.

19. On May 24, 1871, the "City of Corinne," was launched in the Bear River. Except for the barges used in 1957 to 1959 to construct the railway causeway (see Item 67, *infra*), this is the largest boat ever to have been on Great Salt Lake, being a three-decker steamboat, 150 feet long and of 250 tons burthen, propelled by a large paddle wheel at her stern. In early June, 1871, it began to carry ore and passengers from Lake Point, on the south shore of the Lake, to Corinne, on the Bear River on the northeast shore of the Lake, making three trips a week. But within a few

months—by the end of 1871—the boat was reported a financial failure, and in April, 1872, the boat was sold to the Lehigh and Utah Mining Company, and was immediately converted into an excursion boat. By June, 1872, the boat was operating as an excursion steamer out of Lake Side, on the east shore of the Lake below Farmington. In 1875, the boat was renamed the "General Garfield," and moved its home port to Lake Point, also known as Clinton's Landing, on the south shore of the Lake, where it took pleasure seekers 15 or 20 miles out into the Lake in the course of two hour cruises. In 1881, the boat was permanently moored by its then owner, Captain Douris, a short distance west of Black Rock, at a place which came to be known as Garfield Landing, and was used as a hotel and restaurant, its paddle wheel, smokestacks and machinery having been removed. In 1904, the boat caught fire and was destroyed. Ex. P–8, pp. 3, 4, 5, 23C and 26C; Ex. D–3, pp. 25, 74, 75, 88, 163, 193, 206, 207, 229, 244, 253 and 254.

20. On August 9, 1871, John W. Young, a son of Brigham Young, launched "The Lady of the Lake," a "tiny steamboat." This vessel was 30 feet long, had a 10 foot beam, and weighed 7 tons. The boat was used only for pleasure, and although much publicized upon her appearance on the Lake, "she promptly disappeared in the prevailing fog of obscurity shrouding all the early boats." Ex. P–8, p. 18A; Ex. D–3, pp. 75, 88 and 209.

21. The "Water Witch," a yacht owned by the Salt Lake Yacht Club, appears to have been on the Lake from about 1875 to about 1880, and devoted to cruises for the pleasure of the members of the Club. On September 8, 1876, Captain Davis and others made an expedition in the "Water Witch" to determine the feasibility of making an outlet into the desert for the

waters of Salt Lake, the level of the Lake at that time being very high. They were unable to find a point for the proposed cut to be made. Ex. P–8, pp. 20, 23C, 23D and 26A; Ex. D–3, pp. 26, 80 and 225.

22. In September, 1877, Captain Davis put upon the Lake his catamaran, the Cambria, afterwards called the Cambria I to distinguish it from his later boats of the same name. It was about 19 feet long, and had a 10 foot beam. This boat appears to have been used only for pleasure cruises on the lake. It was manned until about 1891. Ex. P–8, pp. 20, 21, 22 and 23D; Ex. D–3, 80, 135, 141, 201 and 210.

23. The "Mary Askie" was one of a number of yachts owned by members of the Salt Lake Yacht Club. This yacht was owned by the Silver Brothers, and in 1877, 1878, 1879 and 1880 participated in the Club's regattas and other sports events. Ex. P–8, pp. 24 and 26A; Ex. D–3, p. 80.

24. The "Petrel" was another such yacht; it was owned by Captain Barratt, and was on the Lake at least until 1882. Ex. P–8, pp. 21, 24 and 26A; Ex. D–3, p. 80.

25. Captain Hudson's "America" was another vessel involved in the yacht club's regatta and sport activities in the late 1870's. Ex. P–8, pp. 24, 26A and 26B; Ex. D–3, p. 80.

26. "Maud," owned by Adam S. Patterson, was another yacht associated with the Yacht Club. The first reference to it is in 1880. There is no evidence that it was used for anything but pleasure and sport. Ex. P–8, p. 18A; Ex. D–3, pp. 80, 135 and 201.

27. The yacht "Pinafore" was associated with the Salt Lake Yacht Club in 1880; it had apparently been built "for the realistic presentation of an opera." Ex. P–8, pp. 18A and 30.

28. "Esther" was a small boat built by Captain

Davis; although there is no evidence as to the purpose of its use, it may have been an excursion boat. Ex. P–8, pp. 18A and 20.

29. After the conversion of the "General Garfield" into a hotel, Captain Dahl's steamboat called the "Whirlwind" took passengers on excursion trips on Great Salt Lake. There are references in the evidence to this boat's being on the Lake in 1884 and 1887. Ex. P–8, pp. 26C and 26D; Ex. D–3, pp. 88, 207 and 229.

30. Captain Douris, the former owner of the "General Garfield," also had his little side-wheel excursion steamer on the Lake; this was the "Susie Riter." The boat was on the Lake in 1886, but its total length of service was only about two years, for in a storm it went down at its anchor. Ex. P–8, p. 21; Ex. D–3, pp. 97 and 207.

31. A reference in the evidence, dated 1889, states that "the 'Eloise Sherman' is a propeller, now used for excursions." Nothing else is known of this boat. Ex. D–3, p. 98.

32. At an early date after the arrival of the settlers in the Great Salt Lake Valley, Henry William Miller and his brother, Daniel Henry Miller, occupied Fremont Island, and used it as a sheep range. Some time before 1884, Daniel Miller's son Jacob designed and helped build the "Lady of the Lake," used by the Millers to haul sheep to and from the island. The boat was 50 feet long and 12 feet wide, with two main masts, the largest one being 50 feet high. She flew four sails—two main sails and two jibs. The ship had two decks, and was capable of carrying 300 head of sheep at a time. When Judge Wenner acquired control of Fremont Island in 1884, he demanded that the Millers remove their sheep, and the boat was used for that purpose at that time. In addition to hauling

sheep, the "Lady of the Lake" was also used for hauling ore, salt and cedar posts. Eventually the ship, in a bad storm, was blown on the beach west of Farmington, where she stood for a number of years, until finally purchased by Judge Wenner (exactly when is not known, but Judge Wenner died in 1891). The ship was renamed the "Argo," and was overhauled for use in going to and from Fremont Island. It appears that this ship was eventually wrecked on the rocks at Promontory Point. Ex. P–8, pp. 16A, 16B, 16C, 16D, 17 and 18A; Ex. D–3, pp. 132, 141, 198, 229 and 236.

33. Before building the "Lady of the Lake," the Millers had used two other small boats. These may have been the sloop and schooner later sold to Charles Spackman, of Farmington, and eventually, shipwrecked near the Promontory. Ex. P–8, p. 16A; Ex. D–3, p. 236.

34. The Millers also built a 75 foot boat with three holds in it for hauling salts from various salt works around the Lake to a railroad connection. This may be the unnamed schooner referred to by Captain Davis as carrying salt from a bed a few miles north of Garfield Beach to a railroad near the Lake. In 1908, the wreck of this schooner could be seen near the tracks at Saltair. Ex. P–8, pp. 16D and 23C.

35. In addition to building boats for themselves, the Millers built prior to 1884 a cattle boat "for another company for the purpose of shipping cattle to Church [Antelope] Island." This was a flat boat about 50 feet long and 18 feet wide. Although there is no evidence in the record either to support or refute this conclusion, it seems likely that this is the cattle boat used by White and Sons, a company which carried on a wholesale butcher business in Davis County, and used Antelope Island for stock raising. The Company kept herefords from England (red cattle with white

faces and markings) as well as buffalo on the island. Their foreman on the island was William Walker, "an expert stockman," whose daughter, Zillah Walker Manning, testified at the hearing in this case. The boat was used by Mr. Walker, as an employee of White and Sons, to carry cattle to and from the island, as well as supplies for the Walker family. It was also occasionally used by the White and Walker families for pleasure trips. The boat appears to have been in use at least until 1903. Ex. P–8, pp. 15, 16D and 39A; Ex. D–3, pp. 229 and 233; Tr. pp. 219–229.

36. Living on Antelope Island at the same time as the Walkers was a George Frarey, who worked for a while at herding cattle on the Island. For this he used a "clumsy, scow-shaped cattleboat, sloop rigged with mainsail and jib, and steered by an oddly placed wheel on the forecastle deck." The boat was used for hauling cattle in 1891, and probably much earlier, but, by 1895 and at least until 1903, the boat was chiefly used for taking passengers on excursion trips over the Lake. Ex. P–8, p. 18B; Ed. D–3, pp. 195 and 196; Tr. p. 225.

37. There is also in the evidence, without any further description, a reference to "the Jake Winters' sheep boat." Ex. D–3, p. 229.

38. Another boat referred to, without any further identification, is George Payne's "Lilly of the Lake." Ex. D–3, p. 229.

39. In 1891, Captain David L. Davis supplanted his original "Cambria" with the "Cambria II," which was also a catamaran, but which was powered by the first gasoline marine engine in Utah. "Cambria II" was 42 feet long, with a 14 foot beam, and was yawl-rigged, with a main and mizzen mast. It appears to have been used for pleasure, and for excursions. It was still on

the Lake as late as 1909. Ex. P–8, pp. 18A and 23D; Ex. D–3, p. 142; Tr. p. 76.[2]

40. Alfred Lambourne, an artist who often took cruises on Great Salt Lake with Captain Davis, moved on to Gunnison Island in 1895 to live there, and to cultivate vineyards, in an attempt to acquire title to it under the Homestead Act. He lived on the island for 14 months, and apparently had the use, during this period of time, of a boat called "Hope." Ex. P–8, p. 18A; Ex. D–3, p. 203.

41. In 1902, the Southern Pacific Railway built a trestle across Great Salt Lake, this trestle, and the tracks on it, being called the Lucin cut-off. The construction of the trestle necessitated the use of seven tugboats and numerous small boats, and a wooden stern wheel steamer, "The Promontory," "which was built on the Lake as soon as the track laid west from Ogden reached sufficient depth of water." This steamboat may have been dismantled in about 1910. Ex. P–9, 10 and 13.

42. At the hearing in this case, counsel for the State of Utah introduced into evidence a picture of a boat called "Lucin," at anchor in San Francisco Harbor, and stated that it was "used at the Lucin cutoff." Nothing else is known about this vessel. Ex. P–8, p. 2D; Tr. p. 241.

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[2] There is a reference in the evidence to a "Cambria III." It is unlikely, however, that such a boat existed. What seems probable is that the author of the reference, knowing that the motor of the Cambria II—this being the first gasoline engine in Utah—was on display in the Utah State Capitol, assumed that the "Cambria" then on the Lake must have been a third "Cambria." It appears, however, that although the original motor on the Cambria II was replaced with a more powerful and a lighter engine as the technology improved, the boat itself was not replaced by another boat.

43. The "Augusta" was a gasoline launch used by the Southern Pacific Railway to patrol the Lucin Cutoff; it was on the Lake in 1908. Ex. P–8, p. 18A; Ex. D–3, pp. 134 and 204.

44. The "E. W. Marsh" was another boat owned by the Southern Pacific Railroad, and used for patrolling the Lucin Cutoff. Tr. p. 96.

45. A boat called "Old Salt Lake" was owned by Charles and John Backman. It seems likely that one of these is the same Mr. Backman who sometime after 1903 carried sheep over to Fremont Island for the owners of that island. Ex. D–3, p. 229; Tr. pp. 227 to 229.

46. The "Seagull" was used prior to 1903 for taking people on excursions to the islands of Great Salt Lake. Tr. p. 227.

47. An excursion boat called the "Alice Ann," which could carry eight passengers, was on the Lake in the years around 1907. Tr. p. 84.

48. John Dooley appears to have had the major interest in the Island Improvement Company which owned, subsequent to White and Sons, the ranching operation on Antelope Island. His tugboat, the "Ruth," was used to haul cattle to and from the island at least during the years 1914 to 1920. Ex. D–3, p. 236; Tr. pp. 85–87, 89, 93–96 and 100.

49. There is in the evidence an undated reference to "'Old Bob,' the Island cattle boat." No information concerning this boat is known. Ex. D–3, p. 229.

50. On June 10, 1909, the stern wheeler excursion steamer ("in good weather") "Vista," which had been operating on Great Salt Lake for two years, sank during a heavy storm. Apparently it was soon refloated, only to be hurled on the shore again during a big storm in July, 1909. The ultimate fate of this ship is not

known. Ex. P–8, pp. 23D, 34A, 34B and 34C; Tr. pp. 87 and 88.

51. The pleasure boat "Irene" was another excursion boat on the Lake at the same time as the "Vista." It was a "large cigar-shaped affair with 50 horsepower gasoline engines." Ex. P–8, pp. 24D, 34B, 34C, and 34D; Tr. p. 87.

52. On July 2, 1909, President Joseph F. Smith and members of his family took a cruise to Bird Island, and other islands in the Great Salt Lake, on the "big gasoline pleasure launch" owned by the Saltair Beach Company. Ex. P–8, p. 34A.

53. W. H. Parker's gasoline powered boat "Victory" was launched on the Lake in July, 1909. The boat was 33 feet long, with a beam of 7 feet, 4 inches. In September, 1909, it engaged in a race with several other "small gasoline launches * * * for the championship of Great Salt Lake." Ex. P–8, pp. 34C and 34D.

54. One of the boats in the September, 1909 race was the "Cozy," Blair Richardson, Captain; Mrs. Richardson at the wheel. Ex. P–8, p. 34D.

55. Another boat in the race was the "Rescue," captained by Larsen, with Will Selly at the wheel. Ex. P–8, p. 34D.

56. Another boat was "Firefly"; Captain Newman; Miss Langford at the wheel. Ex. P–8, p. 34D.

57. Another boat in the race was "Galilee"; Captain, Ralph Brown, aged 10 years; Dorothy Brown, aged 8 years, at the wheel. Ex. P–8, p. 34D.

58. In 1920, the owners of the buffalo herd on Antelope Island used a gasoline launch capable of carrying twenty people both for going to and from the mainland and the island, and for towing a cattle trailer that had a capacity of forty animals. Ex. D–3, p. 238.

59. At the same time, the owners of Antelope Island

also used a smaller craft driven by an airplane propeller. Ex. D–3, p. 238.

60. Some years prior to the death of Captain Edwin G. Brown, in 1937, one Thomas J. Holland went with him on a three day cruise of the islands of Great Salt Lake. The cruise was made with a number of people in a fleet of twelve boats. Captain Brown was the "mentor of the Salt Lake Yacht Club, a group of amateur sailors, carefully selected from business and trade and professional circles—men who had little knowledge of navigation, but a great enthusiasm for learning the rules of the sea * * *." Ex. P–8, p. 31.

61. On October 6, 1935, a Standard Oil plane crashed into the Lake, and the oil company outfitted four boats to search for it. At the completion of the operation, one of these boats was given to the Salt Lake County Sheriff's Office, where it was used "to patrol the area for boats, bathers, in case of storm, difficulty on the lake, lost people." Ex. D–3, p. 173; Tr. p. 105.

62. In the early 1940's, Leon L. Imlay, a witness at the hearing, went to Gunnison's Island in Dick Stoddard's gasoline-driven sheep barge. The purpose of the trip was to observe the guano deposits on the island. Tr. pp. 70, 72, and 102.

63. Boats capable of carrying 12 to 15 passengers operated from the Sunset Beach Resort on Great Salt Lake from 1934 to 1968. For the most part, passengers were brought to the beach by Greyline Motor tour buses, were taken on a 20 or 30 minute trip on the Lake, and then returned to their buses: all within one hour. However, parties could charter boats in the evening for longer cruises. Tr. pp. 111–122.

64. Among the boats used for excursions at the Sunset Beach Resort shortly after the Second World War

was a 28 foot Chris-Craft with an inboard motor. It was used for about 5 years. Tr. p. 113.

65. Also used by one of the excursion concessionaires (Donald Newhouse) at the Sunset Beach Resort was a 40 foot twin engine diesel, which could carry about 35 passengers. Tr. p. 113.

66. A 50 or 60 foot long boat—an LCI—is reported to have hauled guano from Hat Island or Bird Island to the Salt Lake County Boat Harbor during the years 1947 to about 1955. Tr. pp. 117 and 123.

67. In 1957, the Morrison-Knudsen Company began to construct for the Southern Pacific Railway a solid landfill causeway across the Great Salt Lake, parallel to the trestle built in 1902. The construction began early in 1957, and was completed early in 1959. Used in the construction of the causeway were six large dump barges, which were each 250 feet long, 55 feet wide, and 12 feet four inches deep at midship, port and starboard, and two feet deeper than that forward and aft. Pushing each of the barges was a tugboat of a thousand horsepower. Also used were five deck barges, which were 170 by 48 by 10 feet, two 600 horsepower twin screw tour boats, three 220 horsepower tugboats, two dredges, and a number of dredge tenders, anchor scows, anchor barges, pile driving barges, crew boats and scows. The total number of boats used was 39. When the construction work was completed, all except two of the boats used on this project were sold, and removed from the Lake. The two boats remaining on the Lake are used by the Southern Pacific Company for weekly inspections of the causeway. The Railroad has a total of four boats which it uses for these inspections. Tr. pp. 149, 152, 176, 177, 188, 199, 202.

68. In 1963, John Clawson Silver started to operate from the Sunset Beach Resort 20 to 45 minute nar-

rated tours of the Lake on his "sea monsters," that is, converted army amphibious boats. After about two years, he transferred his operation to his own beach, Silver Sands, and continues in that business today. He has a total of nine amphibious boats available for use, although only three are actually at the beach, the rest being in a warehouse. He also uses in this business a launch. Tr. 288, 289.

69. At some time in the recent past John Clawson Silver also used on the Lake a 36 foot Chriscraft boat which was primarily used to take people out on the Lake "as a promotional and goodwill ambassador" for an appliance store he formerly operated. He operated this boat for 13 years. Tr. p. 289.

70. Also in the recent past, Mr. Silver had a barge on the Lake which he used to bring in salt crystals and rock, "not to sell" but just "for decoration and pleasure." Tr. p. 289.

71. The Sanders Brine Shrimp Company, which since 1953 has harvested the small brine shrimp and their eggs from the Lake for processing and sale as tropical fish and trout food, uses three air boats in its operation. These boats are 18 feet long and six feet wide. Tr. pp. 158 and 160.

72. In the recent past, the Sanders Brine Shrimp Company used a 16 or 17 foot boat with a 50 horsepower outboard motor on it, but this boat could not get into the shallow water to which the air boats afford access. Tr. p. 158.

73. A regatta was held on the Lake in 1968, and a number of boats participated in it. Ex. P-26, P-27 and P-28; Tr. p. 211.

74. The "Gilbert," a 42 foot long, 13 ton vessel belonging to the State of Utah Geological and Mineralogical Survey, is currently used on the Lake for con-

ducting scientific investigations. Ex. P-14; Tr. pp. 139, 140, 144, 145 and 147.

75. The "Clyman," a 21 foot long Chriscraft with about an eight foot beam is also used by the Utah State Geological and Mineralogical Survey for the scientific study of Great Salt Lake. Ex. P-14; Tr. pp. 139, 145 and 147.

76. The Utah State Geological and Mineralogical Survey also uses three converted military amphibious trucks, or "ducks" in connection with its studies of the Lake. Ex. P-14; Tr. p. 139.

77. A witness at the hearing said that "Hill Air Force Base has one crash boat," but the witness did not state whether that boat now is, or ever has been, on the Lake. Tr. p. 132.

APPENDIX 3

	Name of Boat	Type of Boat	Owner or User	Date of Use	Purpose	Reference
1.		Bull Boat	Jim Bridger	1824–1825	Exploring	Ex. P-8, p. 18A; Ex. D-3, pp. 252, 254.
2.		Bull Boats	James Clyman	1826	Searching for beaver skins	Ex. P-8, p. 18A; Ex. D-3, pp. 82, 251, 254.
3.		Batteau	John B. Fremont	1843	Exploring	Ex. P-8, p. 18A; Ex. D-3, pp. 93, 252, 254.
4.	Mud Hen	Skiff in wheels	Brigham Young	1848	Exploring	Ex. P-8, p. 18A; Ex. D-3, pp. 53, 54, 180.
5.	The Sally	Yawl	Howard Stansbury.	1850	Survey	Ex. P-8, p. 18A; Ex. D-3, pp. 5, 8, 22, 180, 260.
6.		Skiff	Howard Stansbury.	1850	Survey	Ex. P-8, p. 18A; Ex. D-3, pp. 8, 22.
7.	The Timely Gull		Brigham Young	1854	Transporting cedar, salt, flagging and cattle, and pleasure excursions.	Ex. P-8, pp. 2, 18A; Ex. D-3, pp. 24, 40, 180, 182, 183, 229, 272.
8.	Deseret	Sail Boat	J. Cowdy	1855	Pleasure excursions	Ex. P-8, p. 2.
9.		Rowboat	Brigham Young	1856		Ex. D-3, pp. 38, 229.
10.	Eureka	Sloop	David L. Davis	1865	Pleasure, Surveying	Ex. P-8, pp. 20, 23B, 23D, 24, 25, 27.
11.		Sailboat	Walker Brothers	1860's	Pleasure	Ex. P-8, p. 18A; Ex. D-3, pp. 75, 102, 188, 209.
12.		Yacht	Elbert Eastam, Ben Hampton.	1867		Ex. D-3, p. 57.
13.	Star of the West	Schooner	John B. Meredith.	1867–1868	Carrying salt; Supplying Survey party.	Ex. P-8, p. 18A; Ex. D-3, pp. 56, 140, 189.
14.		"Boat"	W. D. Williams	1869		Ex. D-8, p. 20.
15.	Pioneer	Flat-bottomed Sail boat.	Patrick Connor	1867 or 1868	Carrying railroad ties	Ex. P-8, p. 23G; Ex. D-3, pp. 140, 190.
16.	Kate Conner	Steamboat	Patrick Connor	1868	Carrying railroad ties and telegraph poles.	Ex. P-8, pp. 17, 18A, 23C; Ex. D-3, pp. 60, 75, 190, 192, 245, 254.
17.	Pluribustah	Schooner	Patrick Connor	1869		Ex. P-8, p. 18B; Ex. D-3, pp. 75, 102, 190, 219.
18.		Raft of railroad ties		1868-9	Transporting railroad ties	Ex. P-8, p. 2B; Ex. D-3, p. 191
19.	City of Corinne (Name changed to General Garfield in 1875).	Steamboat		1871	Carry ore	Ex. P-8, pp. 3, 4, 5, 23C, 26C.
				1872–1881	Excursion	Ex. D-3, pp. 25, 74, 75, 88, 163, 193, 206, 207, 229, 244, 253, 254.

20. The Lady of the Lake	Steamboat	John W. Young	1874	Pleasure	Ex. P-8, p. 18A; Ex. D-3, pp. 75, 88, 209.
21. Water Witch	Yacht	Salt Lake Yacht Club.	1875–1880	Pleasure cruises	Ex. P-8, pp. 20, 23C, 23D, 26A; Ex. D-3, pp. 26, 80, 225.
22. Cambria	Catamaran	Capt. Davis	1877	Pleasure cruises	Ex. P-8, pp. 20, 21, 22, 23D; Ex. D-3, pp. 80, 135, 141, 201, 210.
23. Mary Ackle	Yacht	Silver Brothers	1877–1880	Recreation	Ex. P-8, pp. 24, 26A; Ex. D-3, p. 80.
24. Petrel	Yacht	Capt. Barratt	1882	Recreation	Ex. P-8, pp. 21, 24, 26A; Ex. D-3, p. 80.
25. America	Yacht	Capt. Hudson	1870's	Recreation	Ex. P-8, pp. 24, 26A, 26B; Ex. D-3, p. 80.
26. Maud	Yacht	Adam S. Patterson.	1880	Recreation	Ex. P-8, p. 18A; Ex. D-3, pp. 80, 135, 201.
27. Pinafore	Yacht	Salt Lake Yacht Club.	1880	Opera	Ex. P-8, p. 23D; Ex. D-3, p. 80.
28. Esther	Boat	Capt. Davis		Excursions	Ex. P-8, pp. 18A, 30.
29. Whirlwind	Steamboat	Capt. Dahl	1884, 1887	Excursions	Ex. P-8, pp. 26C, 26D; Ex. D-3, pp. 88, 207, 229.
30. Susie Riter	Steamer	Capt. Douris	1886	Excursions	Ex. P-8, p. 21; Ex. D-3, pp. 97, 207.
31. Eloise Sherman	Propeller		1889	Excursions	Ex. D-3, p. 98.
32. Lady of the Lake (Boat later sold to Judge Wenner, who changed name to "Argo".)	Sailboat	Jacob Miller	1884	Hauling sheep, etc	Ex. P-8, pp. 16A, 16B, 16C, 16D, 17, 18A; Ex. D-3, pp. 132, 141, 198, 229, 236.
33.	Sloop Schooner	Millers			Ex. P-8, p. 16A; Ex. D-3, p. 236.
34.	Schooner	Millers		Hauling salt	Ex. P-8, pp. 16D, 23C.
35.	Flat boat	White & Sons	1884	Hauling cattle, Pleasure	Ex. P-8, pp. 15, 16D, 39A; Ex. D-3, pp. 229, 233; Tr. pp. 219–229.
36.	Scow	George Fraley	1895–1903	Hauling cattle, Excursions	Ex. P-8, p. 18B; Ex. D-3, pp. 195, 196; Tr. p. 225.
37.	Sheep boat	Jake Winters		Hauling sheep	Ex. D-3, p. 220.
38. Lilly of the Lake		George Payne			Ex. D-3, p. 229.
39. Cambria II	Catamaran	David L. Davis	1891	Pleasure and Excursions	Ex. P-8, pp. 18A, 23D; Ex. D-3, p. 142; Tr. p. 76.
40. Hope		Alfred Lambourne.	1895		Ex. P-8, p. 18A; Ex. D-3, p. 203.
41. The Promontory	Steamboat	Southern Pacific Railway.	1902	Construction of Lucin cut-off.	Ex. P-9, pp. 10, 13.
42. Lucin					Ex. P-8, p. 2D; Tr. p. 241.

Name of Boat	Type of Boat	Owner or User	Date of Use	Purpose	Reference
43. Augusta	Launch	Southern Pacific Railway.	1908	Patrol the Lucin cut-off	Ex. P-8, p. 18A; Ex. D-3, pp. 134, 204.
44. E. W. Marsh		Southern Pacific Railway.		Patrol the Lucin cut-off	Tr. p. 96.
45. Old Salt Lake		Charles & John Backman.	1903	Hauling sheep	Ex. D-3, p. 229; Tr. pp. 227-229.
46. Seagull			1903	Excursions	Tr. p. 47.
47. Alice Ann			1907	Excursions	Tr. p. 84.
48. Ruth	Tugboat	John Dooley	1914-1920	Haul cattle	Ex. D-3, p. 236; Tr. pp. 85-87, 89, 93-96, 100.
49. Old Bob	Cattle boat			Haul cattle	Ex. D-3, p. 229.
50. Vista	Steamer		1909	Excursions	Ex. P-8, pp. 23D, 34A, 34B, 34C; Tr. pp. 87, 88.
51. Irene			1909	Excursions	Ex. P-8, pp. 24D, 34B, 34C, 34D; Tr. p. 87.
52.	Launch	Saltair Beach Company.	1909	Pleasure	Ex. P-8, p. 34A.
53. Victory	Launch	W. H. Parker	1909	Recreation	Ex. P-8, pp. 34C, 34D.
54. Cozy		Blair Richardson	1909	Recreation	Ex. P-8, p. 34D.
55. Rescue		Larson		Recreation	Ex. P-8, p. 34D.
56. Firefly		Capt. Newman		Recreation	Ex. P-8, p. 34D.
57. Galilee		Capt. Ralph Brown.		Recreation	Ex. P-8, p. 34D.
58.	Launch		1920		Ex. D-3, p. 238.
59.	Propeller				Ex. D-3, p. 238.
60.	12 boats	Capt. Edwin G. Brown.	1937	Recreation	Ex. P-8, p. 31.
61.		Salt Lake County Sheriff's office.	1935	Patrol lake	Ex. P-3, p. 173; Tr. p. 105.
62.	Sheep Barge	Dick Stoddard	1940's	Haul sheep	Tr. pp. 70, 72, 102.
63.	Miscellaneous boats	Sunset Beach Resort.	1934-1968	Excursions	Tr. pp. 111-122.
64.	Chris-Craft	Sunset Beach Resort.		Excursions	Tr. p. 113.
65.		Donald Newhouse.		Excursions	Tr. p. 113.

66.	LCI		1947–1955	Haul guano	Tr. pp. 117, 123.
67.	39 boats	Southern Pacific Company.	1959	Construction of causeway across Great Salt Lake.	Tr. pp. 149, 152, 176, 177, 188, 199, 202.
68.	3 Amphibious boats; 2 Launches.	John Clawson Silver.	1963–1967	Excursions	Tr. pp. 288, 289.
69.	Chriscraft	John Clawson Silver.		Publicity	Tr. p. 289.
70.	Barge	John Silver		Carry salt crystals and rock "for decoration and pleasure".	Tr. p. 289.
71.	3 Air boats	Sanders Brine Shrimp Company.	1967	Harvesting shrimp	Tr. pp. 1–8, 160.
72.	Boat	Sanders Brine Shrimp Company.		Harvesting shrimp	Tr. p. 158.
73.				Regatta	Ex. P-26, P-27, P-28; Tr. p. 211.
74. Gilbert	13-ton vessel	State of Utah Geological and Mineralogical Survey.	1969	Scientific investigation	Ex. P-14; Tr. pp. 139, 140, 144, 145, 147.
75. Clyman	Chriscraft	Utah State Geological and Mineralogical Survey.	1969	Scientific investigation	Ex. P-14; Tr. pp. 139, 145, 147.
76.	3 Amphibious trucks or "ducks".	Utah State Geological and Mineralogical Survey.	1969	Scientific investigation	Ex. P-14; Tr. p. 139.
77.	Crash boat	Hill Air Force Base.	1969	Rescue operation	Tr. p. 132.

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APPENDIX 4

The vessels listed in Appendices 2 and 3, may be placed into eight categories, depending upon the uses to which they were put. The following table lists the eight categories, and indicates, by references to the Item numbers used in Appendices 2 and 3, the categories into which the vessels fall.

I—Pleasure and Recreation

10, 11, 20, 21, 22, 23, 24, 25, 26, 27, 28, 52, 53, 54, 55, 56, 57, 60, 73.

II—Excursion Boats

8, 29, 30, 31, 39, 46, 47, 50, 51, 63, 64, 65, 68.

III—Transporting Sheep and Cattle

35, 36, 37, 45, 48, 49, 58, 62.

IV—Railroad Construction and Maintenance

41, 42, 43, 44, 67.

V—Exploration and Scientific Studies

1, 2, 3, 4, 5, 6, 74, 75, 76.

VI—Commercial Trade or Travel

7, 15, 16, 18, 19, 32, 34.

VII—Miscellaneous Uses

9, 13, 61, 66, 69, 70, 71, 72, 77.

VIII—Unknown Uses

12, 14, 17, 33, 38, 40, 59.

APPENDIX 5

Comments on and Corrections of the State of Utah's Summary of Evidence

1. Paragraph (c) of the summarization of the testimony of Zillah Walker Manning (Br. 16) is:

> c. She remembered that a harvester, requiring 12 horses to pull it, was taken to the island by boat (T. 222); and that grain raised on the island was shipped by boat, "lots of times", about twice a week in the summertime and once a month in the winter (T. 223).

The reference to this transcript shows that Mrs. Manning said two separate things, first, that she saw grain shipped on her father's boat "lots of times," (Tr. 223, line 9), and second, that her father operated the boat twice a week in the summertime, and sometimes once a month in the wintertime (Tr. 223, lines 16 and 18). But Mrs. Manning did not say that grain was shipped twice a week in the summer and once a month in the winter.

2. Paragraph (f) of the summarization of the testimony of Leon L. Imlay (Br. 18) is:

> f. Beginning in 1928, as an employee of the Royal Crystal Salt Company, he was assigned the responsibility of operating the pump station owned by that company and located near Saltair Resort, and used to pump lake brines to evaporation ponds for production of commercial salt; he was in charge of the pump station for about 11 years, or until 1939; during this period he visited the pump station one or two days each week, the pump station being located in water about 8 feet deep; during these visits

> he would see a number of boats, ranging in size from "tiny" boats to large power boats; and, in fact, he and his crew always had to use boats to operate the pump station, carrying crewmen, gasoline for the pump, fresh water and general supplies (Tr. 68–69, 73).

The summary fails to mention that from 1917 to 1939 Mr. Imlay worked for three or four different salt companies on or near the shores of Great Salt Lake, and that during all of this time all of the salt produced by these companies was sent to market by rail (Tr. 73, lines 19 to 25; Tr. 74, lines 1 to 16).

3. Paragraph (a) of the summarization of the testimony of Francis W. Kirkham (Br. 21) is:

> a. He was born in 1877, nine years before Utah's statehood; was familiar with the boating activities at Garfield Beach before statehood; was a paying passenger on the excursion boat pictured on page 12 of Exhibit P–8; and the firsts such trip that he took was before 1896 (T. 233–35).

It is noteworthy that Dr. Kirkham, who was 92 years old at the time of the hearing, and had lived in the area almost all of his life, had never gone to Great Salt Lake for any reason other than recreation.

4. Paragraph (b) of the summarization of the testimony of Phil Dern (Br. 21) contains a minor inaccuracy:

> b. Every year from 1934 to the present time Sunset Beach has operated boats for hire, usually on a concession basis whereby Sunset Beach receives a percentage of the gross income from boat rides and rentals, which percentage now approximates $10,000.00 per year (T. 112); the average boat would carry 12 to 15 passengers, although the present concessionaire (John Silver) also uses several larger amphibious "army ducks" (T. 113).

The word "present concessionaire (John Silver)" suggest that the beach is currently operating, with John Silver as a concessionaire; actually, the beach did not open in 1968 (Tr. 114, line 13) and the testimony with respect to Mr. Dern's plans to obtaining a concession at the new Antelope Island State Park (Tr. 114, lines 18 to 25) suggests that the beach had not been in use in 1969 up until and including the time of the hearing in this matter. And Mr. Silver's testimony shows that while he used to be a concessionaire at Sunset Beach, he now has his own Silver Sands Beach (Tr. 287, line 22; Tr. 288, lines 1 and 2).

5. Paragraph d of the summarization of the testimony of Harold J. Tippets (Br. 24) is:

> d. The State of Utah, Salt Lake County and Hill Air Force Base own and operate rescue craft on the lake (T. 132).

What Mr. Tippets actually said is that the State has craft which *will be* on the Lake; that county Sheriff offices *have been* involved in rescue operations on the Lake, and that Hill Air Force Base has one crash boat (Tr. 132, lines 16 to 25). But he did not say, as the summary suggests, that any of these organizations *presently have* craft on the Lake.

6. Paragraph (e)(1) of the summarization of the testimony of Thomas T. Lundee (Br. 26) is:

> e. The Great Salt Lake was particularly economical for navigation, because:
> (1) The water did not freeze in winter and the causeway fleet operated day and night, six or seven days a week, twelve months a year (T. 177);

The summary is correct (although the reference to the Lake's not freezing is on page 172 of the transcript), and doubtless when the Lake is as low as it

was in 1957 to 1959, the higher salt concentration then existing would make the formation of ice an extremely rare phenomenon. However, in past years, when the level of the Lake has been higher, ice has been a menace to the few boats on the Lake. In Plaintiff's Exhibit 8, on page 21, appears this entry in the Journal of Captain David L. Davis:

> November, 1882. 16th to 20th was caught out in an ice flow on the great Salt Lake. The circumstances were these: The "Cambria" was blown out from her anchorage at Lake Shore by a hurricane. J. F. Hardie and myself went in search of her in the "Petrel." We found her still anchored to about 300 feet of railroad iron within 3 or 4 miles to the south end of Antelope Island. On our way out we met some ice but had no trouble getting through. We captured a muged goose, and placed him in the forepart of the boat.
>
> Coming home Hardy in "Petrel" and myself in "Cambria," we struck hard ice about three miles off Lake Shore and was stuck fast about 500 yards apart. We had no bedding nor food of any kind, and for two days I had no food or water except what ice I melted and that was so salty it made me vomit. We landed in the afternoon of Sunday at the Day farm in Kaysville having drifted some 8 or 10 miles with ice field since Thursday when we stuck. This was my worst trip on the lake.

And some time before, Christopher Layton, who had purchased the "Kate Connor" to use for transporting sheep to and from Antelope Island for the Mormon Church, had had a similar experience in that boat (Ex. D-3, p. 70):

> I had charge of the sheep and island for five years, and we had many exciting adventures and also some accidents, but no lives were lost and many are the good pleasant times we had.

> At shearingtime our girls and boys, with one of my wives to take charge of affairs, would go over to the island. Also at haying time the young folks enjoyed the pleasure of these trips. On one occasion we were bringing a load of fat sheep to Salt Lake for mutton, when the boat was caught in the floating ice, which, coming from Bear River and Jordan River, had met and formed a jam, from which we were unable to extricate ourselves for forty-eight hours. The pounding of the ice on the sides of our boat caused it to leak. We all united in calling upon the Lord in our extremity, and my wives and children, who were on shore and could see our peril, also prayed for help. A wind arose which drove the ice away, so we were enabled to reach shore, although we were obliged to go back to the island first. Then the next morning, the ice being gone, we easily crossed and were received with much rejoicing by those dear ones who had been so anxious for our safety.

Thus, ice and frozen waters are not altogether unknown to Great Salt Lake.

7. The first clause in paragraph (c) (3) of the summarization of Mr. Lundee's testimony (Tr. 27) is:

> (3) The greater buoyancy of the waters of the Great Salt Lake made navigation more economical than navigation on other inland waters or oceans because there is at least a 20% bonus in carrying capacity (T. 171):

But, as an excerpt from other evidence in the record shows (Ex. D-3, pp. 29—30), this additional buoyancy is a mixed blessing:

> Owing to the density of the waters of the lake, boats that ordinarily would sink to the water line of the boat in fresh water, rode so high as to make them top-heavy in the salty wa-

ter. Even a moderate disturbance gives to the shore breakers prodigious power and the waters become very buoyant. When there is an unusual disturbance they become most destructive, but when a tornado hits the lake it is simply irresistible. With these facts in mind one can readily understand why boats of the lake were so easily lashed to pieces.

8. Paragraph (c) of the summarization of the testimony of Gail Sanders (Br. 29) is:

> c. The company uses three air boats 18 feet long and 6 feet wide (each capable of carrying about 1,200 pounds of adult shrimp) (T. 158-59); other boats have been used in the past, but the air boats are preferable because they can operate in any depth of water (T. 158).

The paragraph may be read as suggesting that air boats were required because the water was deep; the transcript shows that the air boats were required because the water was shallow (Tr. 158, lines 21 to 25).

9. Paragraph (c) of the summarization of the testimony of Elmer Butler (Br. 33) is:

> c. He also testified that he was familiar with the lake and was aware of the dolomite deposits near the lake which were shipped to the Geneva Plant of U.S. Steel for use as a flux, and that he worked at the dolomite mine as a boy (T. 261); that he was aware of "very valuable deposits" of dolomite sands on Stansbury Island which could only be shipped by boat during "expected" high cycles of the lake level (T. 262); that he was aware of valuable guano deposits shipped from Gunnison Island and Hat Island (T. 262); and knew that the livestock on Fremont Island could only be shipped by boat "or

helicopter" and that the livestock on Antelope Island, during high water levels, could only be shipped by boat (T. 263–64).

It is well that the word "expected" is in quotation marks, for the transcript reveals that the person who expects the Lake to rise again is the sanguine attorney for the State of Utah who examined the witness, and not the witness himself (Tr. 262, line 7).

10. The first of the summaries of the exhibits requiring comment is P–7, which is described (Br. 34) as

> P–7 Early 1871 mining map showing lake and location of General Connor's steamship routes on the lake (T. 32).

The description is accurate; what we wish to point out is that General Connor's one steamboat, the *Kate Connor,* was no longer owned by him in 1872—one year after the date of the map. (And, as we have noted, there are many allusions in the evidence to the sinking of this boat in 1871.) Whether his two other boats, the "Pioneer" and the "Pluribustah," were still on the lake in 1871, and under his control, is unknown.

11. Page 2A of Exhibit 8 (Br. 34) is described as

> Page 2–A Account of large shipments of railroad ties on the lake in 1869.

The words "shipments" should be singular; it is an account of one shipment only, and, as a matter of fact, there was only one such shipment in the history of the Lake. Ex. D–3, p. 191.

12. The summary of page 2–B of Exhibit 8 (Br. 34) is:

> Page 2–B Account of the late 1860's and early 1870's where steamboats shipped "great quantities of ore" from south end of lake to northeast part

of lake, and excursion boats capable of carrying 300 passengers.

What Mildred Mercer actually wrote in this account was, first, that "the Tooele county mines were producing great quantities of ore" and second, that "a steamboat, *City of Corinne*, had been built to haul ore and passengers from a spot near Black Rock to Corinne, across Great Salt Lake." Both of these statements are correct: great quantities of ore were produced, and the steamboat was built to carry them. But Mrs. Mercer to her credit did *not* say that the steamboat actually carried great quantities of ore, or any quantities of ore, and as we have seen from our review of the evidence, the steamboats on the Lake, although built to carry ore, were soon diverted to other uses.

13. The summarization of pages 3 to 5 of Exhibit 8 (Br. 34 and 35) is:

> Pages 3–5 Newspaper advertisements in 1875 and 1876 promoting commercial passenger service on ship "General Garfield." The advertisements also reflect the variety and volume of commercial shipments, e.g., on page 4: "On and after August 1st the regular rates on Ore, Bullion, Coke, Charcoal and Coal will be $2.15 per ton between Salt Lake City and Halfway House in lots of not less than 12,000 lbs. loaded and unloaded by the company, and $2.00 per ton when not loaded or unloaded by the company. Freight for the west will be received on weekdays only from 7 a.m. to 10 a.m. and forwarded the same day, while that received from 10 a.m. to 6 p.m. wil [sic] be forwarded the next day. For any further information concerning freight, apply to J. N. Pike, Gen'l Freight Agent, G. W. Thatcher, Gen'l Passenger Agent, H. P. Kimball, Gen'l Superintendent."

The State's summarization of the document which constitutes page 4 of Exhibit 8 is grossly misleading, as can be determined by even the most casual examination of the document itself, which is an advertisement placed by the Utah Western Railway; the rates given for the transportation of freight are rates for transportation *by train* from Salt Lake City to Halfway House, and the rates are given in terms of *car lots* which is, of course, a term having a special meaning for the freighting of goods by rails. The word "car" in the phrase "car lots" is omitted from the State of Utah's purported quotation of the advertisement.

It is clear from the advertisement appearing on page 5 of Utah's Exhibit 8 that Halfway House was not a stop on the Lake, but a stop some distance from the Lake, and that the stop on the Utah Western Railway's line where the connection with the steamer was made was at Lake Point. It should also be noted that the connection with the steamer was not to permit passengers to continue on their trip to some destination, but only to afford them the opportunity of taking an excursion on the Lake "returning in time for the train arriving at Salt Lake City at 7 p.m." It is equally clear, from the fact that no rates are quoted for freight only to Lake Point, that Lake Point in fact was not a place where freight was loaded or unloaded onto the train. Indeed, that the train carried "Ore, Bullion, Coke, Charcoal and Coal" undoubtedly explains to some extent why there was not any significant carriage of freight on the Lake.

14. Utah's characterization of page 9 of its Exhibit 8 (Br. 35) continues this misconception; the State says page 9 contains:

> Page 9 Photographs of steamship "General Garfield" and shipping dock at Halfway House near Lake Point.

To the extent that there is an identification of the place where the photographs on page 9 of Exhibit 8 were taken, the pictures are clearly shown to have been taken at Lake Point, which is, of course, where the excursionists transferred from the railroad to the boat. There is no reference anywhere in evidence which would put the site depicted in the photograph at Halfway House—Halfway House being, as page 3 of the Plaintiff's Exhibit 8 shows, the place where the train connected with the Stages for Stockton, Ophir and Dry Canyon, and where the freight was transferred to the Stages. Thereis no explanation in the State's brief of the identification of these pictures as having been taken at Halfway House; there is merely the bald assertion that these pictures show the General Garfield at Halfway House. The State has seriously erred in representing the evidence as showing the carriage by the General Garfield in 1875 of "Ore, Bullion, Coke, Charcoal and Coal."

15. Exhibit P–40 is described as a

> P–40 Contract showing present mining and removal of lime sand for flux from Stansbury Island on Great Salt Lake (T. 285).

The description is correct; the only point to be made here is that this "island" is actually, for the most part, and in fact, at the present time, a peninsula connected with the mainland (Ex. D–3, p. 171).

16. Two minor corrections in the descriptions of the Exhibits may also be noted: Exhibit P–2 (Br. 33) shows the levels of Great Salt Lake from 1850 to the present time; Exhibit D–2 (Br. 41) was not prepared by the United States Geological Survey, but by the Utah Geological and Mineralogical Survey.

APPENDIX 6

Contents of Defendant's Exhibit 3

1. Exploration and Survey of the Valley of the Great Salt Lake of Utah:
   Howard Stansbury, Philadelphia, 1852-- 1
2. Utah—The Storied Domain:
   J. Cecil Alter, Chicago and New York, 1932 ---------- 23
3. The Journal of James Clyman:
   Utah Historical Quarterly, Salt Lake City, Utah, 1951---------- 30
4. Gold Seekers on the Hastings Cutoff:
   Charles Kelly, Utah Historical Quarterly, Salt Lake City, Utah, 1952---------- 33
5. Thrilling Experiences:
   Solomon Farnham Kimball, Salt Lake City, 1909---------- 37
6. History of Brigham Young—1847-1867:
   MassCal Associates, Berkeley, California- 50
7. The City of the Saints and Across the Rocky Mountains to California:
   Richard Francis Burton, London, 1861-- 58
8. A Journey to Great-Salt-Lake City:
   James Remy and Julius Brenchley, M.A., London, 1861---------- 65
9. Christopher Layton:
   Myron W. McIntyre and Noel R. Barton, Published by Christopher Layton Family Organization---------- 68
10. Tourists' Guide Book to Salt Lake City:
    H. L. A. Culmer, Salt Lake City, 1879--- 71

11. The Resources and Attractions of the Territory of Utah:
Utah Board of Trade, Omaha, 1879---- 73
12. The Utah Pioneers:
Salt Lake City, 1880---------- 79
13. Utah Gazetteer and Directory of Logan, Ogden, Provo and Salt Lake City, for 1884:
Robert W. Sloan, Salt Lake City, Utah, 1884 ---------- 82
14. Salt Lake City:
Salt Lake Chamber of Commerce, Salt Lake City, 1888---------- 90
15. Salt Lake City:
Marcus E. Jones, Salt Lake City, 1889-- 92
16. The Resources and Attractions of Utah:
Passenger Department, Union Pacific (Robert E. Strahorn), Chicago, 1888-- 100
17. A Complete and Comprehensive Description of the Agricultural, Stock Raising and Mineral Resources of Utah; Also, Statistics in Regard to its Climate, Etc.:
Passenger Department, Union Pacific, Chicago, 1888 (2d Edition)---------- 105
18. A Complete and Comprehensive Description of the Agricultural, Stock Raising and Mineral Resources of Utah:
Passenger Department, Union Pacific, St. Louis, 1892 (5th Edition)-------- 110
19. Sights and Scenes in Utah for Tourists:
Passenger Department, Union Pacific System, Omaha, Nebraska, 1890------ 115
20. The Wonderlands of the Wild West, With Sketches of the Mormons:
A. B. Carlton, 1891---------- 120
21. Utah The Land of Blossoming Valleys:

George Wharton James, Boston, 1922-- 122
22. Utah:
Marcus E. Jones, A.M., New York, 1902- 125
23. Our Inland Sea—The Story of a Homestead:
Alfred Lambourne, Salt Lake City, 1909- 128
24. Pictures of an Inland Sea:
Alfred Lambourne, Salt Lake City---- 137
25. The Mountain Empire Utah:
Geo. E. Blair & R. W. Sloan, Salt Lake City, Utah, 1904---- 143
26. Through the Heart of the Scenic West:
J. Cecil Alter, Salt Lake City, Utah, 1927 ---- 147
27. Utah—Resources and Activities:
Utah Department of Public Instruction, Salt Lake City, Utah, 1933---- 159
28. Community Life in Salt Lake City and Utah:
James Timbrell Worlton, Salt Lake City, Utah ---- 161
29. Utah The Incredible Land:
Ward J. Roylance, Salt Lake City, Utah, 1965 ---- 164
30. The Great Salt Lake:
Dale Lowell Morgan, Indianapolis-New York ---- 166
31. Mormon Country:
Wallace Stegner, 1942---- 216
32. Tales of Utah:
Utah Writers' Project, 1941-1942---- 223
33. East of Antelope Island:
Daughters of Utah Pioneers, Davis County ---- 226
34. History of Tooele County:
Daughters of Utah Pioneers, Salt Lake City, Utah, 1961---- 239

35. The Great Salt Lake:
David E. Miller, Salt Lake City, Utah, 1963 ---------- 248
36. Stansbury's Survey of the Inland Sea:
Bernice Gibbs Anderson, Utah Historical Quarterly, Salt Lake City, Utah, 1958-- 257
37. The Gentile City of Corinne:
Bernice Gibbs Anderson, Utah Historical Quarterly, Salt Lake City, Utah, 1941-- 267
38. Lake Bonneville:
Frederick James Pack, Ph.D., Salt Lake City, Utah, 1939---------- 273
39. Census of Population: 1960; The Eighteenth Decennial Census of the United States:
Washington, D.C., 1961---------- 279

APPENDIX 7

INDEX TO DEFENDANT'S EXHIBIT 4

	Number of pages
Item A. Memorandum, Investigations of Small Craft Harbors on Great Salt Lake, Utah, dated 14 May 69	2
Item B. Notice of Initiation of Investigation, Corps of Engineers, Sacramento, California, dated 15 Oct 69	1
Item C. Memorandum Report, Subject: Small Craft Harbor Great Salt Lake, Utah, dated 24 Jun 60	10
Item D. Analysis of Great Salt Lake National Monument Proposal	15
Item E. Letter to Secretary of Army from Sam Rayburn, Speaker of the House, dated Jul 28, 1951	1
Item F. Corps of Engineers Form 1118, dated 27 Jul 51, with accompanying papers:	
1. Draft of letter to Speaker of House from Secretary of Army	1
2. Copy of letter from Bureau of Budget, dated 17 Jul 51	1
Item G. Letter. to Speaker of House of Representatives, from Secretary of Army, dated Jul 26 1951	1
Item H. Letter to Bureau of Budget, dated June 29, 1951, from Secretary of Army	1
Item I. Letter to Secretary of Army, dated Jul 17, 51, from Bureau of Budget	1

Item J. Letter to Secretary of Army dated 25 Jun 51 from Chief of Engineers, Subject: Great Salt Lake, at or near Garfield, Utah ---------- 2

Item K. Corp of Engineers form 1118, dated 20 Jun 51, with accompanying papers:

1. Letter to Bureau of Budget from Secretary of Army ---------- 1
2. Copy of letter, State of Utah to Office of Chief of Engineers, 5 Jun 51 (dup.) ---------- 1
3. Copy of letter, Department of Interior to Office of Chief of Engineers, 21 May 51 (dup.) -- 1

Item L. Letter, State of Utah to Chief of Engineers, dated June 5, 1951 ---------- 2

Item M. Return Receipt dated Apr 3, 1951, Form 3811

Item N. Letter to Brig. Gen. Chorpening, Assistant Chief of Engineers dated Apr. 3, 1951, from Senator Wallace F. Bennett ---------- 1

Item O. Letter to Chorpening, Assistant Chief of Engineers, dated Apr 2, 1951 from Senator Arthur V. Watkins ---------- 1

Item P. Memorandum to Chief, Civil Works Branch, Bureau of Budget, dated 28 Mar 1951, from W. D. Milne, Lt. Col., Corps of Engineers, Subject: Preliminary examination and survey of Great Salt Lake at or near Garfield, Utah ---------- 1

Item Q. Letter to Congressman Reva Beck Bosone, dated 28 Mar 1951, from Assistant Chief of Engineers, Brig. Gen. Chorpening ---------- 1

Item R. Letter to Congressman Bennett, dated 28 Mar 1951, from Assistant Chief of Engineers ---------- 1
Item S. Letter to Congressman Watkins, dated 28 Mar 1951, from Chief of Engineers 1
Item T. Letter to State Engineer Linke, dated 28 Mar 1951, from Chief of Engineers 1
Item U. Letter to Division Engineer, San Francisco, California, dated 28 Mar 1951, subject: Preliminary examination and survey of Great Salt Lake, at or near Garfield, Utah, from Milne, Lt. Col., Corps of Engineers---------- 1
Item V. Letter to Secretary of Interior, dated 28 Mar 1951, from Chief of Engineers 1
Item W. Memorandum to Chief of Engineers, dated 23 Mar 1951, from Corps of Engineers, Sacramento, California--- 1
Item X. 3rd Indorsement to Chief of Enginers, dated 2 Feb 51, from Major General Bragdon ---------- 1
Item Y. 1st Indorsement to Chief of Engineers, dated 25 Oct 50, from J. S. Seybold, Colonel, Division Engineers---------- 1
Item Z. Memorandum to Division Engineer, Oakland, California, dated 18 Aug 50, from Lt. Colonel Milne---------- 1
Item AA. Public notice relative to Survey Report for navigation boat harbor on Great Salt Lake near Garfield, Utah, dated 8 Nov 1950---------- 1
Item BB. List of interested parties to whom Division Engineer's public notice is being furnished on Survey Report for navigation on Great Salt Lake, boat harbor at or near Garfield, Utah ---------- 6

Item CC.	Letter to Senator Thomas, dated 25 Oct 1950, from Colonel Seybold, Division Engineer	1
Item DD.	Letter to Division Engineer, Oakland, California, dated 18 Aug 1950, from Lt. Colonel Milne, Corps of Engineers	1
Item EE.	1st Indorsement to Chief of Engineers, dated 2 Jun 49, from Colonel Elliott	1
Item FF.	Memorandum to Chief of Engineers, dated May 9, 1949, from J. T. Murphy, Captain, Corps of Engineers, Executive Assistant, Subject: Survey Report for Navigation, Boat Harbor on Great Salt Lake near Garfield, Utah	1
Item GG.	Draft public notice relative to Survey Report for navigation boat harbor on Great Salt Lake near Garfield, Utah, undated	2
Item HH.	Memorandum to Chief of Engineers, dated 18 Mar 1949, from Colonel R. H. Elliott	1
Item II.	2nd Indorsement, dated 14 Sept 49, to Division Engineer, Oakland, California, from Corps of Engineers	1
Item JJ.	1st Indorsement, dated 24 Aug 1948, to Chief of Engineers, from Colonel Elliott	1
Item KK.	Letter to Chief of Engineers, dated 20 Aug 48 from Colonel Gorlinski, District Engineer	1
Item LL.	2nd Indorsement to Division Engineer, Oakland, dated 21 May 48, from Lt. Colonel Jewett, Corps of Engineers	1

Item MM. Letter to Chief of Engineers, dated 16 May 48, from H. D. G. Baxter, Acting Chief, Engineer Division---- 1

Item NN. Transcript of Public Hearing held at 27 Apr 1948, from Colonel Gorlinski, District Engineer---------- 1

Item OO. Survey Report from Navigation Boat Harbor on Great Salt Lake near Garfield, Utah, dated April 1, 1949-- 24

Item PP. Letter to Assistant Attorney General, Land and Natural Resources Division, dated 9 May 1968, from Colonel Young, District Engineer, Sacramento, California---------- 1

Item QQ. Letter to Chief of Engineers, dated Salt Lake City, Utah, by the War Department for the purpose of considering the advisability of providing a harbor for light-draft vessels on Great Salt Lake, near Garfield, Salt Lake County, Utah, Wednesday, 10 Jul 1946, 2:00 o'clock P.M.-- 43

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SUPREME COURT, U. S.

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Supreme Court of the United States

No. 31, Original.

October Term, 1967.

STATE OF UTAH,

Plaintiff,

v.

UNITED STATES OF AMERICA,

Defendant.

REPORT OF SPECIAL MASTER.

J. CULLEN GANEY,
Senior Circuit Judge,
Special Master.

International, 711 So. 20th St., Phila., Pa. 19103—Tel. LO 7-5711 Area Code 215

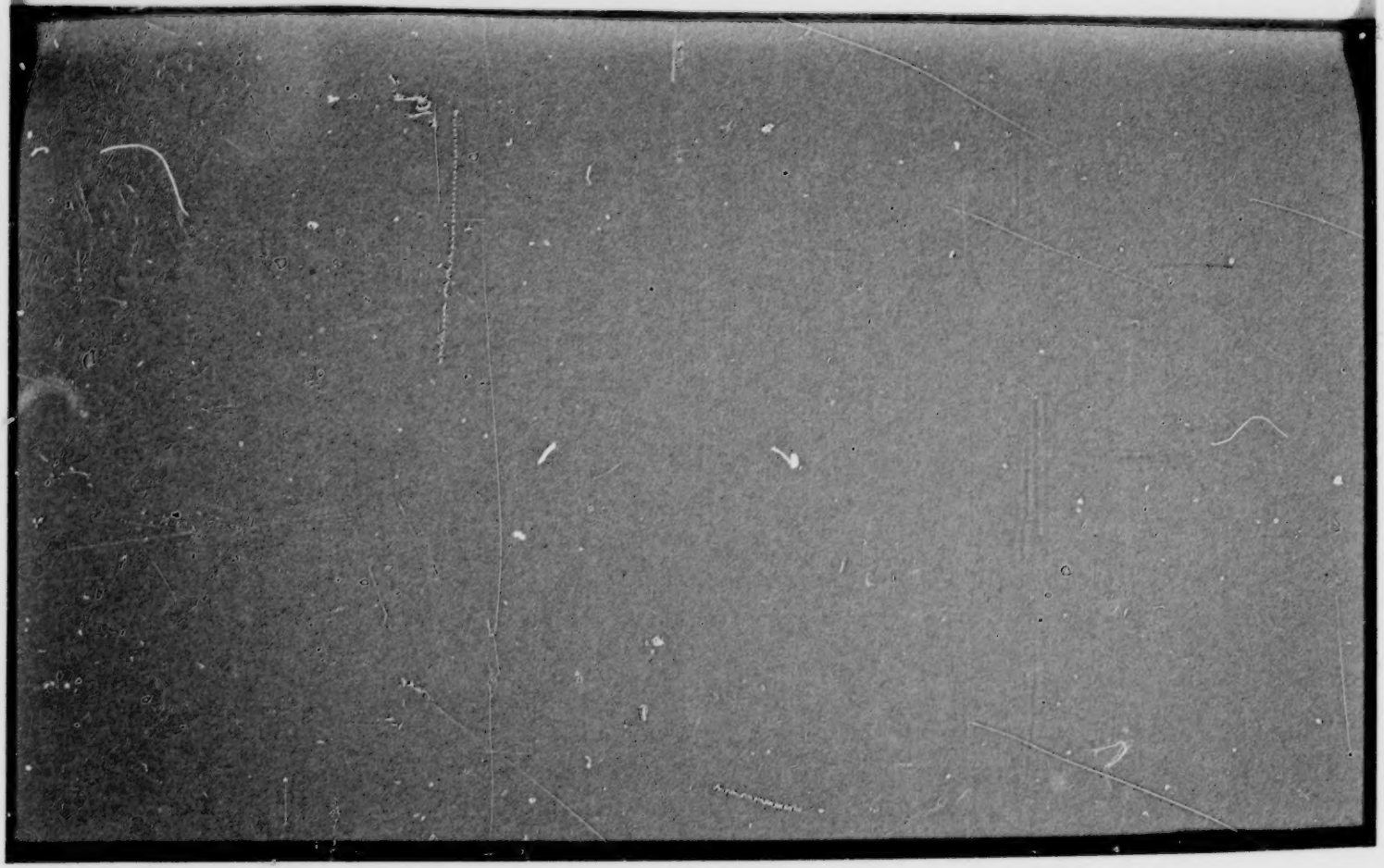

TABLE OF CONTENTS.

Page

I. Summary of Recommendations 2

II. Preface 3

III. Findings of Fact 9

Part I.

Findings of Fact Previous to and Contemporaneous With Statehood 9

Part II.

Preliminary Statement 30

Findings of Fact Subsequent to Statehood 31

IV. Conclusions of Law 50

V. Proposed Decree 53

VI. Appendix 55

Docket Entries 55

Appendix A—Letter From Clerk of U. S. District Court District of Utah to Judge Ganey 60

Appendix B 62

Appendix C 63

Appendix D 66

Appendix E 67

IN THE

Supreme Court of the United States

No. 31, ORIGINAL.

OCTOBER TERM, 1967

STATE OF UTAH,

Plaintiff,

v.

UNITED STATES OF AMERICA,

Defendant.

REPORT OF SPECIAL MASTER.

To the Chief Justice and Associate Justices of the Supreme Court of the United States.

Pursuant to the authorization given me in the Per Curiam Opinion of March 3, 1969, 394 U. S. 89, 96, to proceed to the merits in this original action, your Special Master submits the following recommendations based on suggested findings of facts and conclusions of law.

I.

SUMMARY OF RECOMMENDATIONS.

1. Great Salt Lake on the date of the State of Utah's admission into the Union be found to have been navigable under the laws of the United States;

2. The State of Utah be granted a decree by the Court quieting the right, title and interest to the bed of Great Salt Lake in itself as against the United States;

3. A decree be issued by the Court declaring that the State of Utah is not required to pay the United States for the land covered by Great Salt Lake as of January 4, 1896;

4. The request of the United States for a decree quieting the right, title and interest to the bed of Great Salt Lake in itself as against the State of Utah be denied, and

5. The Court adopt the decree proposed by the Special Master or require the parties to submit a decree which in form is acceptable to them.

II.

PREFACE.

Pursuant to an Act authorizing the conveyance of certain lands, Public Law 89-441, 80 Stat. 192, as amended 80 Stat. 349, the United States has given the State of Utah a quitclaim deed conveying all title and interests which the former might have, with some exceptions not relevant here, to land within a surveyed meander line of the Great Salt Lake at a price to be determined if the Court should decide that the former owned the land conveyed; on the other hand, if the Court should conclude that the State of Utah already had title to that same land, the latter need pay nothing to the United States.

The State of Utah claims, as successor in interest to that of the United States, that it acquired title to the land which was covered by the Lake on January 4, 1896, the date of its admission into the Union, and brought the original action here involved for a decree quieting title in itself as against the United States.[1] The latter opposes this claim by asserting that title to the land did not pass to the State of Utah until the quitclaim deed, above mentioned, became effective. Should the United States prevail, this case would be at an end. On the other hand, should the State of Utah substantiate its claim of title, further proceedings will be necessary to determine other issues, one of them being whether the State lost its original title by reason of the common-law doctrine of reliction to certain portions of the former bed as the Lake became exposed after Statehood.

The foundation for the State's claim of title is that as an incident to the transfer of local sovereignty when it be-

1. Private parties were not permitted to intervene inasmuch as a stipulation entered into between the United States and Utah had so limited the issues that the presence of those private parties was neither necessary nor appropriate. 394 U. S. 89 (March 3, 1969).

came a part of the Union, it acquired whatever title to the domain as a territory possessed and not conveyed away by the United States prior to January 4, 1896 (*Shively v. Bowlby*, 1894, 152 U. S. 1, 49-50; *Choctaw Nation v. Oklahoma*, 397 U. S. 620, 633 (1970), by reason of the "equal footing" principle. The operation of that principle, as construed in *Pollard's Lessee v. Hagen*, 44 U. S. (3 How.) 212 (1845), and subsequent decisions of this Court, requires that, in the absence of a Congressional condition to the contrary, a state, upon its admission into the Union, is to be afforded the same property interest in submerged lands as was enjoyed by the thirteen original States as successors to the rights of the British Crown. English law viewed the beds of great navigable rivers, which so happened to be tidal, as belonging to the Crown rather than to the riparian landowners. Therefore when the thirteen Colonies became independent, each one of them succeeded to the ownership of the beds of all navigable rivers and lakes located within its borders. *Martin v. Wadell*, 41 U. S. (16 Pet.) 367 (1842); *Pollard v. Hagen, supra; Shively v. Bowlby, supra; United States v. Holt State Bank*, 270 U. S. 49 (1926); *United States v. Utah*, 283 U. S. 64 (1931).

"But if the waters are not navigable in fact, the title of the United States to land underlying them remains unaffected by the creation of the new State." *United States v. Oregon*, 295 U. S. 1, 14 (1935); *Massachusetts v. New York*, 271 U. S. 65, 69 (1926); *Oklahoma v. Tennessee*, 258 U. S. 574, 583, 591 (1922).

Therefore, the present issue before this Court in this case is whether Great Salt Lake was navigable in fact when the State of Utah was admitted into the Union on January 4, 1896.

The classic definition of navigable rivers and most frequently cited, appears in *The Daniel Ball*, 77 U. S. (10 Wall.) 557 (1870), a case involving the power of Congress to regu-

late under the Commerce Clause. At page 563 of the opinion, this Court stated:

> "Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water . . . ."

Each determination is to be made on its own set of facts. It is to be determined according to the law and usages recognized and applied in the Federal courts. And for purposes of determining a state's claim to title of underwater land the inquiry as to navigability is not the same in every respect, as when admiralty jurisdiction is at issue,[2] or when the question of the Congressional power to regulate under the Commerce Clause arises,[3] but is limited to the time when the state was admitted into the Union.[4]

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2. For this purpose, the time is the present even though trade and travel have been made possible by improvement of the water course by artificial means. See e.g., *The Robert W. Parsons*, 191 U. S. 17, 26 (1903). On the subject of admiralty jurisdiction, the Clerk of the United States District Court for the District of Utah has informed me by letter that he has been unable to locate any admiralty action filed in that Court. See letter dated October 23, 1969, Appendix A.

3. In such a case, the test is more generous, and treats as subject to regulations waters which were (a) once navigable but are no longer (e.g., *Economy Light & Power Co. v. United States*, 256 U. S. 113, 123-124 (1921)); or (b) only recently have become passable (e.g., *Philadelphia Co. v. Stimson*, 223 U. S. 605, 634, 635 (1912)), or (c) are not now, never have been, but may become so by reasonable improvements (e.g., *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 409 (1940)).

4. The finest example of the application of this rule is the case of *United States v. Holt State Bank*, 270 U. S. 49 (1926), where former Mud Lake in Minnesota was held to have been navigable at statehood even though the Lake had been drained and its bed uncovered at the time evidence was taken.

Also by definition the water course is to be judged in its natural state at the time of statehood, and future artificial improvements to the water course or its feasibility, or the predictability of natural changes for the better, are not to be taken into account. Additionally, the physical condition of the water course must have been such as to accommodate at least the craft customarily used for trade and travel on water at that time. *Oklahoma v. Texas*, 258 U. S. 574 (1922). And the waterway must have a "capacity for practical and beneficial use in commerce." *Id.*, at 591, or more directly, as affording "a channel for useful commerce." *Brewer-Elliott Oil & Gas Co. v. United States*, 260 U. S. 77, 86 (1922). Also see, *United States v. Holt State Bank*, *supra*, at 56; *United States v. Utah*, *supra*, at 76. "It does not depend upon . . . the difficulties attending commerce. . . ." *Brewer-Elliott Oil & Gas Co. v. United States*, *supra*, at 86.

Evidence of actual useful commerce at date of Statehood is the most persuasive kind to establish navigable capacity, but such evidence is not indispensable to show that quality. It may be shown by physical characteristics demonstrating capacity, or it may be inferred from evidence of actual use at an earlier or later date.

The State of Utah has offered evidence to show physical capacity of the Lake to support navigation as of the date of Statehood. It did not stop there. To illustrate this capacity it also has shown the variety of vessels which have sailed on the Lake, both before and after the critical date, and the purposes for which they were put when the need arose.

In opposition to the State of Utah's claim, the United States maintains that from the uncontroverted facts the Lake cannot be found to be navigable because it was not an

artery of interstate commerce.[5] It argues that in the 144 or 145 years since the Lake was discovered, a thriving commerce and trade has not developed upon it, unless pleasure boating is considered as such.[6] The United States therefore argues, despite the obvious physical capacity of the Lake to support large water craft over a large area, that the State of Utah has not met its burden of proof in this case. It points out that the potential of a water course as an artery of commerce may be obviously lacking from the beginning, and that subsequent history will often be relevant in confirming that appraisal.

This argument they continue to support, in addition to other unfavorable physical characteristics of the Lake, by citing excepts from writings describing the shallow shorelands, the sailing difficulties encountered from the high brine concentration of the Lake, the desolateness and inaccessibility of its shores, and by citing population, location and distribution as confirming the useless nature of the Lake so far as commerce is concerned.

The State of Utah counters by saying that the argument of the United States is based on an erroneou interpretation of the definition of navagability. It maintains that speculation as to the relative probabilities or improbabilities of the present or future need for useful commerce is not to be indulged in, when the waterway has conceded physical capacity, and that factors such as geographical setting, accessability, population density and distribution,

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5. However the United States reads the opinions of *United States v. Utah*, 283 U. S. 64, 75 (1931) and *United States v. Oregon*, 295 U. S. 1, 14 (1935), as foreclosing this argument at this juncture and merely preserves the point "in the event it seems appropriate to urge reconsideration of those decisions when the Special Master's report is before the Honorable Court." See Brief of the United States with respect to the Navigability of the Great Salt Lake, p. 9.

6. Brief of United States with respect to the Navigability of the Great Salt Lake, p. 20.

transportation facilities, degree of industrialization and related developments in the neighborhood of the waterway may only be considered to explain limited use or non-use where that body of water has doubtful physical capacity; that if significant commercial needs arise, the Lake will be there with its physical capacity to serve as a useful highway of commerce. Nevertheless, the State of Utah has offered evidence which it believes will demonstrate that a judgment to the effect that there is little or no prospect of any future need of useful commerce on the Lake is furthest from the truth.

III.

FINDINGS OF FACT.

From the evidence presented to him and from his own observations of the Great Salt Lake and its environs, in the company of counsel for both parties, the Special Master respectfully suggests that the following findings of facts may be found:

Part I.

Findings of Fact Previous To and Contemporaneous With Statehood.

1. Great Salt Lake (the "Dead Sea of America"), appropriately named by Colonel John C. Fremont, was discovered in 1824 or 1825, over seventy years before Utah Statehood,[7] in an area which was Spanish colonial territory and later Mexican.

2. On February 7, 1848, the United States acquired this territory by treaty of peace with Mexico. 9 Stat. 922, 926, 929, 932. The locally-authorized State of Deseret existed from March 12, 1849, to the time the Territory was established.

3. On September 9, 1850, the land which was to become the State of Utah was established as the Territory of Utah. The Constitution and laws of the United States were declared to be in force in the Territory "as far as may be applicable." 9 Stat. 453.

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7. It has been written that the famous scout and fur trapper, Major James Bridger, one of the many given credit for discovering the Lake, sailed down the Bear River until he reached Bear River Bay into which the River flows, and tasted the water but immediately spit it out. Ex. P-8, p. 18A; Ex. D-3, pp. 252-254. This is understandable, as the salt concentration in the Bay was nearly thirty times greater than that of his body fluids.

4. On January 4, 1896, by Presidential Proclamation No. 9, 29 Stat. 876, pursuant to the Utah Statehood Enabling Act of June 16, 1894, 28 Stat. 107, setting forth the conditions entitling the people of the Territory to become a State, that Territory was proclaimed a State and admitted into the Union as the forty-fifth "on an equal footing with the original States." Prior to that time, starting in 1850, the United States was the owner in fee of all the land in the Territory with the exception of those portions which it had transferred to private interests by patents.

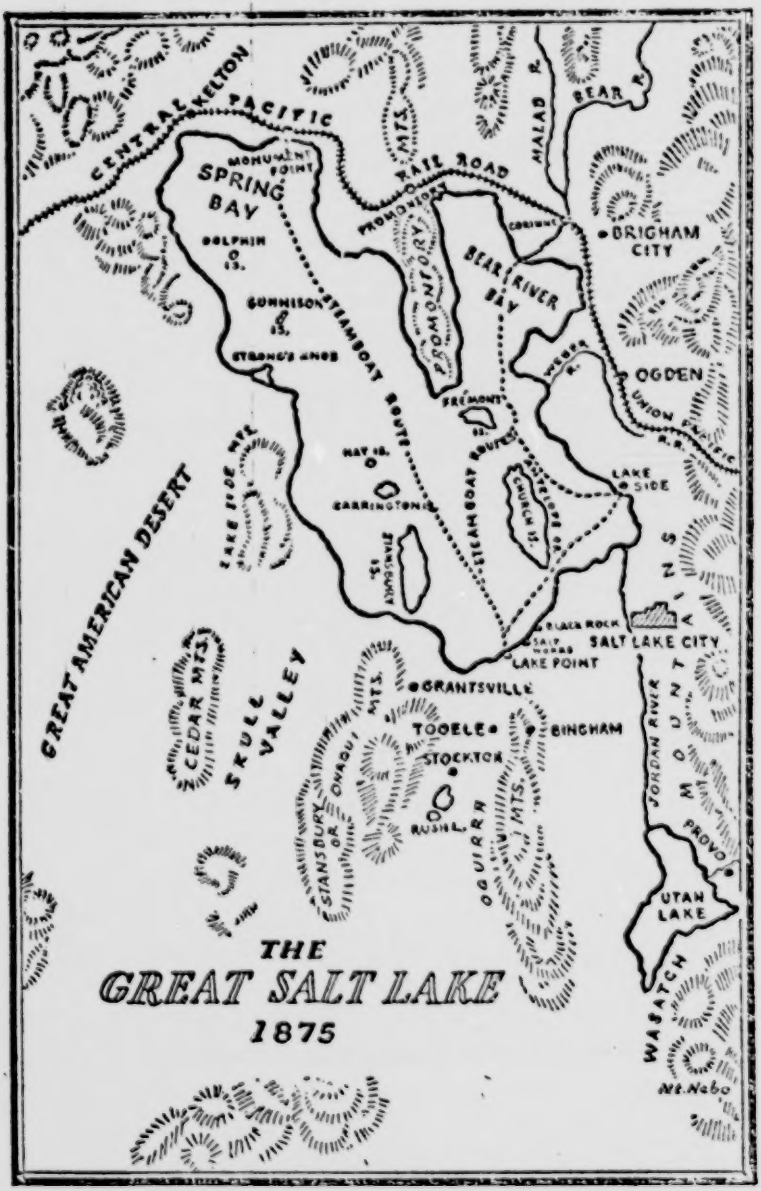
5. Great Salt Lake is a body of water entirely within the State of Utah. It lies between 40° 40′–41° 44′ north latitude[8] and 112° 10′–113° west longitude in the northern part of that State.

6. At the date of Utah Statehood, the Lake had a maximum length of approximately 77 miles, a maximum width of 32.5 miles, and a maximum depth of about 30 feet. Its shoreline was over 500 miles long, and its waters exposed an area of over 1,500 square miles to the sun. Excluding the Great Lakes, it is the largest lake in the United States. It is also one of the largest in the Western Hemisphere not interconnected with an ocean.

7. *Description of the Lake's border.* The Lake is bordered on the north for the most part by a headland thirty-three miles long, known as Promontory (Prŏm′-ŭn-tō′rĭ), which juts southwardly to almost the center of the Lake and divides the northern half into two unequal arms. The Promontory Mountains, a Lofty but narrow range, running north and south as do most of the moun-

8. Washington, D. C. lies just below 39° north latitude approximately on a line thirty miles south of the south shore of the Great Salt Lake.

[Reproduced from Exhibit D-3, p.193]



The Great Salt Lake at its commercial heyday and its highest recorded level.

tain ranges in this area, occupies a thirty mile long strip of this projecting land area. The southern shore is set with two mountain ranges standing edgewise to the Lake and their valleys. These are the Oquirrh (O Kwer), rich in copper, lead and silver, and Stansbury (formerly known as the Aqui or Onaqui) Mountains. The Tooele (Too el) Valley lies between these two ranges. To the east of the Oquirrh is the Jordon Valley and to the west of the Stansbury Mountains is Skull Valley (formerly Spring). The south edge of the Lake forms a bay area at the mouth of the Tooele Valley directly south of the Promontory tip. A small isolated rock formation piercing the water offshore midway between two small islets, a sentinel at the foot of the Oquirrh, acts as a landmark on the south shore. It is known as Black Rock. The west shore is roughly on a line sloping in a northwesterly direction at a sixty degree angle. A small peninsula with a mountain 700 to 800 feet high is situated on this shore almost directly west of the tip of the Promontory. It is a landmark and known as Strong's Knob, so named by Captain Stansbury, Strong's Knoll or Strongknob. West of this line is the sprawling Great Salt Lake Desert, formerly known as the Great American Desert, which reaches the State's western border fifty-five miles away. The Sierra Nevada, the reputed west wall of the Great Basin, is further to the west. This desert, having a gentle downward slope toward the Lake of four and one-half inches to the mile, is interspersed with several mountain clusters. Two of these, within a few miles of the shorelines, are the Terrace on the west, and Lakeside Mountains to the southwest. The irregular east shore is also roughly on a line which slopes in a northwesterly direction almost parallel to the west shoreline. It consists almost entirely of salt and mud flats. From four to eighteen miles east of this shore lie the peaks of the 8,000 feet high, above the Lake

level, Wastach (Was' sach) Mountains that form the eastern wall of the Great Basin. The southeastern segment of the shore follows a line, which starts at the mouth of Tooele Valley, sloping northeasterly at an angle of forty-five degrees and continuing until it reaches a point a few miles north of the Jordan River estuary.

8. *Shallow Shores.* The Lake has throughout its perimeter, except in a few places, unusually gentle inclining shores, having a slope of less than one foot in 1,000 feet.

9. *Islands in the Lake in 1896.* The Lake has a variety of islands, some of which can be identified as being part of mountain ranges running north and south through the Lake, whose total number and outline vary as the water level varies. A few small islands will merge with their larger neighbor, and some, which are close to the water's edge, will become part of the shore during low water stages. The mountain ranges enclosing the basin and the island heights clearly evidence water marks at different levels, one as high as 800 feet above the Lake level. When the level is high, some are partly inundated while others are entirely covered. These islands may be more easily visualized in the minds eye if the Lake is divided into quadrants.

(a) The largest by far is *Antelope Island* (earlier known as Church Island, because it was taken over by the leaders of the Church of Jesus Christ of Latter Day Saints, commonly called Mormons), named after the antelope that roamed the island. It is in the southeast quadrant. This land mass is about sixteen miles long and six miles wide at its widest point, and has an area of approximately 26,000 acres, not counting relicted land which may almost double its area. The east side is comparatively smooth, and the west is made up of serrated peaks which rise 700 feet above

water level. Its southern end lies a short distance off the southeast shore. It is surrounded on the north by a bed twelve feet deep, on the east by six feet of water, and on the west by a deposit of mud. It is an oasis in a desert of salt water and the land supports the raising of livestock. The island has been continuously inhabited since 1848. A mile west of the northern tip is a small grassless rocky islet called Egg, either for its shape or because Captain Stansbury gathered eggs there. White Rock, as the name indicates, is a huge rock jutting out of White Rock Bay located on the west side of the northern end.

(b) The third largest land mass, also located in the southeast quadrant, is *Fremont Island*,[9] named after Colonel John Charles Fremont who was first to explore the island in 1845. It lies four miles southeast of Promontory Point, five miles east of the Weber River estuary and about seven miles northwest of Antelope. It is semi-lunar in shape, six miles long, three wide, fourteen miles in circumference and has an area of about 3,000 acres. The highest point is a turreted oblong eminence called Castle Peak on the northeast portion, 800 feet above the level of the Lake. The water around it averages six feet in depth. It has the best bay in the Lake and boats can sail up to its beach without difficulty, the depth of the water being eighteen feet deep within a hundred yards of the shore. This island, although timberless, has rich grass and supports the raising of livestock.

(c) The second ranking land mass in size, located in the southwest quadrant, is *Stansbury Island*, named after

9. A Mrs. Zillah Walker Manning, born in 1891 on the Lake's east shore, called as a witness by the State of Utah, referred to this land area as Wenner's Island, because a Judge Wenner had lived there. Transcript, Vol. II, p. 226. Judge Wenner was born in Bethlehem, Pa., in 1849, died September 19, 1891, and was buried on Fremont Island.

Captain Howard Stansbury, commissioned by the Federal government to survey the Lake in 1849-50. This land mass is oval in shape, twelve miles long and four miles wide, and twenty-seven miles in circumference. It has high central rocky ridges, the highest reaching 2,445 feet above the level of the Lake. The eastern side supports the raising of livestock; the western side is arid. Valuable deposits of dolomite sands exist here. Like Antelope and Fremont, the greater part of this island was privately owned.

(d) The fourth largest land area, also in the southwest quadrant, is *Carrington Island,* named after Albert Carrington who surveyed the east shore in 1848. It is about five miles distant from Stansbury Island, almost an equal distance from the west shoreline, and twenty miles from Antelope Island. It is a circular mass eight miles in circumference, covering an area of more than a square mile and has a 600 to 700 foot high peak with a mild slope. It is indented with several open bays and sandy beaches of oolitic sand, and boats can come close to its shore, since the water is from three to six feet deep around it except the south and southwestern shores which are shoals and shallows, and which are more extensive than the island itself. A small islet, Badger Island, is just south of this island.

(e) *Hat Island,* so named because it resembles a colonial hat floating on water, is four miles north of Carrington Island. The water between these islands is "quite shoal, the deepest being only six and one-half feet." It is a rocky mass of some twenty-four acres, and its highest point rises eighty feet above the water. It has a small level beach when the level of the Lake is low. When the gulls, pelicans, herons and cormorants use this island as a nesting sanctuary, it is one of the main tourist attractions by boat.

(f) The remaining three islands are in the northwest quadrant. The largest of these is *Dolphin Island*, so named because of its shape, a rocky elevation of seventy feet and about 1,000 square yards, mainly of conglomerate rock in horizontal strata, surrounded by shallow waters. It lies twenty-two miles south of the northern edge of the Lake and a few miles off the west shore near the Terrace Mountains.

(g) Thirteen miles further south and seven miles from the west shore line lies *Gunnison Island*, named after Captain John W. Gunnison, an efficient Lieutenant in Stansbury's expedition. It is approximately 155 acres with a cliff 400 to 500 feet high, white sand beaches and surrounded by nine to twelve feet of water. *Cub Island* is immediately northeast of Gunnison. These islands, because of their safety from predatory animals, like Hat Island and Carrington, are frequented by a large number of migratory aquatic birds, and thousands of sea gulls have been known to migrate from the Pacific coast for the rearing of their broods of young here on these desolate spots. The islands are valuable for their guano deposits. Six miles south and a little west of Gunnison Island, almost directly west of the top of Promontory is a Knoll, 700 to 800 feet high, close to the west shore. It is a landmark and is known variously as Strong's Knob, the name given to it by Captain Stansbury, Strong's Knoll or Strongsknob Mountain.

(h) These islands are said to form parts of mountain ranges. The Oquirrh Mountains, Antelope, Fremont and Promontory Mountains, forming one of them. The Stansbury Mountains, and the islands of Stansbury, Carrington and Hat make up another, while Strong Knob, Cub, Gunnison are probably lined up with the Lakeside Mountains to the south. There is a ranch house at Antelope Island where the ranchers live, and some herders stay on Fremont Island, but the remaining islands are uninhabited by man.

10. The deepest section of the Lake for the greatest distance is between the Oquirrh and Stansbury Mountains chains and continuing on up into the northwest arm between Promontory and the west shore. The Bear River Bay and the east shore are shallow as are great areas along the west and southwest shore. The average depth was about 13 feet. Shallow parts of the Lake can be easily avoided by keeping boats in the deeper sections.

11. The Lake occupies the bottom portion of a large depression known as the Great Basin. It is what's left of an ancient gigantic fresh water sea known as "Lake Bonniville," which had a surface area ten times the present. The bed at its lowest level was approximately 4,170 feet above mean sea level, exceeding the height of the average Appalachian Mountain, and the water's edge was 4,201 feet 3 inches above mean sea level. The shore for the most part has a slope of less than one foot in 1,000 feet. A rise of a few feet in the water level will inundate great areas of land surrounding it, and a similar drop will leave large areas uncovered.

12. The Lake is a drainage spot for a large area. In addition to it being fed by underground streams and precipitation from the air, a number of tributary rivers flow into it. The principal ones being the Bear, Weber and Jordan Rivers. The Bear and Weber enter the Lake on the northeast. The Jordan, whose source is Utah Lake, twenty miles south, empties from that direction. The Weber and Jordan are entirely within the State of Utah, while the Bear originates in Utah but flows through two northern bordering States, Wyoming and Idaho, before reaching the Lake. The Federal government, since 1875, maintains gauging stations to measure the year-round level of the Lake and keeps records of those readings.

13. The Lake is without an overflow level lower than its rim [10] and therefore waters coming into it do not flow out. Although some water has been pumped out of the Lake by industry, there has been no artificial attempt to maintain an even level by drawing more from it. That has not been necessary because the supply of water from the outside has not been enough to offset evaporation. As a consequence the level has gradually lowered from a recorded high of 40 feet 8 inches (4,211.75 feet above mean sea level) in 1873 to 30 feet 3 inches (4,201.25 feet) at time of Statehood. In 1850, 1857 and 1860 the level of the Lake approximated that in 1896. It has been estimated that the amount of water needed to maintain the level of the Lake is 3,500,000 acre-feet per year.

14. Absent the wind, the Lake is a comparatively smooth calm body of water, being without ebb and flow of the tides and eddies. The hardly noticeable currents that exist are the result of the inflow of fresh waters from the rivers, which remain on the surface at some distance from the mouths of those rivers until they ultimately blend with the brine. From the variable blasts of the wind the smooth surface becomes ruffled and mimic waves develop in unbroken series, their size depending on the speed of the wind.[11] They sometimes reach heights of from five to eight

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10. According to Grove Karl Gilbert one must go twenty miles northwest of Preston, Idaho, to Red Rock Pass, which is about 625 feet above the level of the Lake, for a glimpse of the first overflow level to the Great Basin. At one time the pass was a thousand feet high (P-31, p. 27).

11. Concerning the waves that can be churned up by the wind, Captain Stansbury was moved to write about one of his experiences while sailing on the Lake: "The crew were all entirely unaccustomed to the water, and were no little alarmed at the heavy swell caused by the gale, which was much greater than I had anticipated, and made most of them quite sea-sick." (Ex. D-3, p. 8).

feet and break with a slow but powerful motion.[12] The topography of the bed remains relatively constant and is covered with a soft muck. There are no reefs, sandbars, rapids, floating debris or underwater obstructions.

15. The level of the Lake experienced an annual rise and fall seldom exceeding two feet in a year, the average being about 1.7 feet. The high water seasons are in the months of May and June, and the lows in October and November. Wind "tides" cause temporary variations in the level, sometimes reaching three feet and uncovering many square miles of the bed on one side while flooding many square miles on the others.[13]

16. The Lake has a high concentration of soluble solids, or salts, the residue of accumulations over the years, comparable to that of the Dead Sea. The factors of no outlet and evaporation were conducive to that condition. The concentration varies inversely with the volume of the Lake, the saturation point being around 28% by weight. It varied from 13.7% at its "highest" stage in the 1872-1874 period to 22% in 1896. In 1896 a cubic foot of the Lake weighed about 76 pounds in comparison to 62.4 pounds for an equal volume of distilled water. In other words with distilled water being unity, the Lake had a specific gravity of 1.2 or a

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12. "The waves are very heavy and roll lazily even in sev e storms." (Ex. D-3, p. 127).

13. In his report of 1852 Captain Stansbury notes: "It will be seen that the rise and fall of the water of any particular locality is dependent in great measure upon the force and direction of the wind; making a difference of nearly a foot in a very short time. This of course makes a corresponding difference in the extent of the sandflats [on the west shore], amounting in many cases to miles in width." (Ex. D-3, p. 17). And: "The water, under the influence of the northern blast, rose upon the beach crossed by the line a few days since so as to extend some 6 or 7 miles to the south of it; but this morning it had returned to its old boundaries, upon the subsidence of the gale." (Ex. P-31, p. 29).

20% greater buoyancy than that of the ocean.[14] Thus a vessel on the Lake during that period could carry a 20% greater load than on the ocean.

17. The Lake is not an attraction for the fishing enthusiast nor a source for the cravings of the seafood gourmet. At any depth of consequence it is almost free of oxygen. Fish entering from the rivers soon suffocate and become pickled. However, the Lake is not without aquatic life though the variety of venegtation and marine life is surprisingly small. "There is more life in the water than in any body of its size, fresh or salt, but the species are few. There is an *Alga* (seaweed) about the size and shape of buckshot, looking like a globule of great jelly, which abounds everywhere in countless number. Upon the *Alga* feeds a minute [brine] shrimp, from a quarter to a half-inch long which looks like a very small minnow with a feathery tail."[15] The globular sea-weed, of which there are several kind, float in ragged mats on the surface, sometimes giving it a red tinge. They also support the larvae of two species of flys in their grub stage. The Lake will not support the raising of other crustacea or oysters or clams. Wood piling and other wood products placed under water are "preserved" or "embalmed", and not subject to the attack of teredos (shipworms), barnacles, fungi, and other destructive agents, for they simply do not exist in the brine.

18. The shores, with an occasional sector of grass where springs come to the surface, were as flat, barren, bleak and treeless in 1896 as when Captain Stansbury surveyed the Lake in 1850. "There are no trees on the borders

14. It was inevitable that a sloop sailing upon the Great Salt Lake would be named Eureka! (See Ex. P-8, pp. 20, 23B, 24, 25, 27.)

15. Ex. D-3, p. 94.

of the lake, nor on any of the adjacent plains. It is necessary to ascend almost to the summit of the surrounding mountains to procure firewood, composed of green trees, some maple, willow, poplar and oak. Nothing is to be seen near the shore but a few withered plants, ..."[16] Except for an area at the southeastern shore near the base of the Oquirrh Mountains, where the beaches are located, the Lake is surrounded by stretches of salt flats, marshes or bogs, some of which are in places several miles in width.[17]

19. Settlement in the vicinity of the Lake began about 1847, some twenty-three years after the Lake's discovery, when the Mormon pioneers, attracted by Fremont's report, arrived in the Valley. Ever since 1850, there have been sizable settlements several miles from the Lake. Salt Lake City to the southeast was the first and largest. Ogden and Brigham City on the east are next in size in that order. The mining and smelting town of Grantsville, Tooele and Stockton were established in the Tooele Valley.

20. *Railroads:* It was on the Promontory that the famous "Golden Spike" was driven home on May 10, 1869, as the last act in the completion of the first continental railroad, the joining of the Central Pacific and the Union Pacific railroads. This railroad, after having reached Ogden, continued in a northwesterly direction, crossed the Bear River and skirted the northern shore of the Lake on its way to the Pacific coast. The accomplishment of this railroad feat ushered in the building of new railroads or the extending of railway lines into the Lake's environs. In

16. Jules Remy, *A Journey to Great Salt Lake City*, Vol. I, p. 181 (Ex. D-3, p. 67).

17. "Almost everywhere land and water were divided by mud flats, across which they were forever dragging their boats and packing their baggage." *The Resources and Attractions of Utah* (1888), p. 62 (Ex. D-3, p. 102).

1870 the Utah Central connected Ogden with Salt Lake City. And by 1878 the Salt Lake and Pioche Railroad (Later became Utah Western Railway, and then Utah and Nevada) extended its line westward to Lake Point, and the mining towns of Tooele, Stockton and Tintic, in Utah, and then on to Pioche, Nevada, by way of the Sevier Valley. The Denver & Rio Grande Western Railroad reached Ogden in 1883, and then Lake Side in 1886. Salt Lake City and Saltair resort were connected in 1893 by the Salt Lake, Garfield and Western Railroad.

21. *Summer Resorts on the Lake at Time of Statehood:* There were a number of resorts on the east and southeast shores of the Lake visited annually by over a hundred thousand people.[18] They were important here because they maintained the sole docking facilities, built upon piling extending into the water, on the Lake. There was *Lake Side* (1870) on the east shore one mile below Farmington near a main railroad line, Utah Central, connecting Ogden and Salt Lake City in 1869. A little north of this resort, and west of Syracuse junction, was *Lake Park* (1886), with its long covered pier running into the water, built and operated by the Denver & Rio Grande Western Railroad. On the southeast shore at the base of the Oquirrh Mountains, 22 miles from Salt Lake City, was *Lake Point* (1870) near *Black Rock*. During the existence of this resort it was known as Steamboat Landing, Steamboat Point, Clinton Landing (named after Dr. Jeter Fieldy Clinton, its founder), Short Branch (1876) and Clinton's Beach. The overland stagecoach stopped there. Five years after its beginning, the resort was serviced by the Salt Lake &

18. The bathing season began about June 1 and continued to October 15. Temperature of the water started from 60° and increased until August when it went up to 85° where it remained for some weeks. (See Ex. D-3, p. 94.)

Pioche Railroad, which extended its line to that resort, then farther south to the mining towns of Tooele, Stockton and Tintic, and on to Pioche, Nexada, by way of the Sevier Valley. The railroad became known as the Utah Western Railroad, and still later, the Utah and Nevada. Also a short distance and west of Black Rock and a little east of Lake Point was *Garfield Beach* (1878), named after President James A. Garfield. At first it was called Garfield Landing. In early 1887 the Utah and Nevada took over the resort and added a pavilion of 135 by 65 feet, and a steamboat landing over 400 feet from shore. It was the only resort on the Lake "having a clean, sandy beach, free from mud, rocks and offensive vegetable matter." (Ex. D. 3, p. 207.) At *Saltair* (1893), also on the southeast shore, 17 miles from Salt Lake City, a pile-supported track carried the Salt Lake, Garfield & Western Railroad 4,000 feet out into the Lake. At the end of this piling was a large two-story pavilion, containing for that period an immense ballroom. During the summer season over 100,000 people would visit these resorts. Each of the resorts included boating, as well as bathing, as part of its program. Some of them featured excussion trips into the Lake. For example, the steamer "City of Corinne", in June of 1872, sailed from Lake Side, where she was based until renamed the "General Garfield", to Lake Point, and from there to Monument Point at the north edge of the Lake. This same ship carried ore from various points, including Lake Point, on the shore of the Lake to the smelter at the City of Corinne, 20 miles up the Bear River.

22. The principal industries in the Lake and its environs at time of Statehood were salt extraction, raising and transportation of livestock (horses, cattle, sheep and some buffalo), mining and smelting, operating of summer

resorts which featured bathing and pleasure boating and excursions on the Lake.

23. Although there is evidence of water craft having traveled on the Lake before [19] and after January 4, 1896, there is none at time of Statehood.

24. And even though there is evidence that vessels sailed from the Bear River to the Lake, and up the Jordan River from the Lake, there is no evidence upon which to base a finding that vessels could travel on water between the Lake and its affluents to any place outside of the State of Utah since 1824.

25. *Factors favorable to travel and hauling by water craft on the Lake and in its natural condition at time of Statehood.*

(a) Level of Lake remained relatively constant;

(b) Depths of 5 to 30 feet over a wide area;

(c) Profile of bed did not change abruptly;

(d) No underwater obstructions or floating obstacles;

(e) Calm surface and lack of tides and strong currents;

(f) Availability of Lake's surface for sailing of water craft not intermittent or infrequent, but regular and dependable; and

(g) Salt concentration increased buoyancy of the water and lowered its freezing point which was a deterrent to the formation of thick ice on the surface.

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19. A total of forty boats were identified as having been on the waters of the Great Salt Lake from 1824 until the admission of the State of Utah into the Union.

26. *Natural drawbacks to travel and hauling by water craft at time of statehood.*

(a) *Shallow shores.* The gradual shelving of the basin and the softness of the shore surface make it unusually difficult to get boats from dry land into floatable water.[20] To reach water five feet deep, one must move out a mile or more from the water's edge. Greater sailing stability in deep water and safety of craft are sacrificed for shallowness of draft and flatness of bottom despite the twenty percent "bonus" in buoyancy of the Lake so that the vessel may get closer to shore without running aground.[21]

(b) *Absence of natural harbors.* This condition is not unique. There are very few natural harbors in the world, and most harbors need some type of artificial improvement to make them usable or commercially profitable for loading and unloading of vessels, such as breakwaters, dredging, or building of piers of sufficient length to reach deep water.

(c) *Absence of protective harbors.* Naturally sheltered inlets, bays and havens do not exist along the shores of the Lake. Boats on the Lake, unless they happened to be on the leeward side of one of the large islands or near one of the resorts, were at the mercy of the winds and waves.

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20. This condition caused Captain Howard Stansbury to remark of his experience during the survey of the Lake in 1850: "The loss of the skiff is deeply felt—the nature of the shore being such that large boats, when loaded, cannot, in many places, approach within three miles of the land, and the lighter vessel is therefore indispensable." Ex. D-3, p. 19.

21. "Owing to the shallowness of the water, from the Cambria's time [1870] to the present [?], it has been generally recognized by yachtmen that keel boats are unsuited to Great Salt Lake, and shallow draft boats have come to dominate the lake." The "Cambria" is said "to have been the first boat of the English model of catamaran built in America. She was 20 feet long with a 10-foot beam, and with 5 feet of space between the two slims, pointed boats which formed her divided hull." Ex. D-3, p. 210.

And unless someone stood watch, the only sure way of protecting a boat from the acts of the curious, the prowler and the vandal, was to remove the boat from the Lake. The necessity of having to retract the boats and towing them away has a tendency to limit the size of boats used on the Lake.

(d) *Natural landings.* Convenient locations for launching and landing of boats are not to be found on the Lake. Of course there were some places which were superior to others. These are few, however, and are found on the beaches at the foot of the Oquirrh Mountains and a bay area on the western shore of the Promontory about seven miles north of the tip, and they were not readily accessible to the settled area east and southeast of the Lake.

(e) *No outlets.* For this reason the Lake has been infrequently used as an artery by water or as a link in interstate travel or commerce.

(f) *Salt spray.* Storms break out over the Lake with little advanced warning.[22] This adverse wheather condition and the swells it whips up are not in themselves too formidable a deterrent to sailing upon the water. It is the spray from the waves that is distasteful. When it drys, the spray, by reason of its high salt concentration, leaves a white powderly coating on boat, clothing, and skin.[23]

(g) *Sodium sulphate precipitation and encrustation.* The maximum solubility point of certain salts is dependent

22. See, for example, Ex. P-8, p. 34-B (July 5, 1909).

23. Around 1902, the botanist and geologist, Marcus E. Jones, wrote: "Though the air is very invigorating and healthful on account of the salt spray, there is very little sailing upon the lake because of the unpleasant effect of the salt which crystallizes upon the body and clothes in thick scales from every drop of water which strikes them. Salt water soon destroys leather and rubber and causes disagreeable cracks in the skin, when it is not washed off by fresh water." Ex. D-3, p .127.

upon the volume and temperature of the Lake and other solids in solution. When the volume and temperature go below certain readings, some salts will precipitate from the solution. Sodium sulphate, found in solution in the Lake, is one of these. As adequately explained in *The Mountain Empire Utah* (1940), p. 78: Sodium sulphate, 6.22% of the soluble solids, "is insoluble in a strong brine at low temperature, and every winter it separates spontaneously from the water as soon as a critical point of temperature—near 32 degrees F. or 0 degrees C.—is reached. This material is known commercially as glauber salt [named after the chemist Johann Rudolph Glauber] and mineralogically as mirabilite. As it crystallizes from the brine at winter temperature, the lake is rendered opolescent, and the sulphate settles on the lake bed, or near shore and is thrown up on the ocean brink. As the temperature of the water rises, the glauber salt is taken into solution [again] . . . . The abundance of deposit each year is surprising. Indeed, during the cold months a visitor to the lake shore has to wade through the glauber salt accumulations, sinking at each step to the knees." (See Ex. D-3, p. 146. Also see Ex. P-8, p. 18A.)

27. *Conditions in the Lake's environs.*

(a) *Accessability to the shores by land:* The Lake has desolate shores. It is ringed with great stretches of salt flats, salt marshes and bogs which made difficult an approach to its shores by foot, horseback or horsedrawn vehicle. The building of railroads to the summer resorts decreased this problem at those points. But even these approaches could not always be depended upon because of the caprice of the water's edge.

(b) *Lack of nearby trees:* The absence of handy suitable lumber on the shores restricted boat building to those

able to command labor to ascend the mountain canyons to retrieve the trees, the best being none too good, necessary for such purposes,[24] or who could afford the cost of transporting a vessel by rail from the boat building centers.

28. The population centers of the Lake's environs were in the area between the east and southwest shore and the Wasatch Mountain Range, and include such cities as Salt Lake City, the largest, Ogden and Brigham City. In the Tooele Valley to the south were the towns of Gransville, Tooele and Stockton. When the smelter of Corinne became inaccessible by boat from the Lake, a smelter was built at Grantsville, at the base of the Stansbury Mountains. None of these places were within ten miles of the Lake's shore.

29. *Meander line:* A complete official survey of the Lake's "meander line" has never been made. A partial one was accomplished in 1855, with many gaps, and some parts, particularly on the west side in Box Elder County, were omitted. This incomplete survey line has been "accepted" by the Surveyor General, and has been plotted on the official records of the officers of the county recorders in the counties located along the Lake.

30. Congress has never declared by special act that the Lake is non-navigable.

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24. On this subject, Captain Stansbury reported: "During the winter, a large boat was built for the survey of Salt Lake. This was an achievement of no little difficulty, as almost every stick of timber used in the construction had to be procured from the canons of the mountains, piece by piece; and the planking, although the best material the country afforded, was so 'shaky' and liable to split and crack, that it was totally unfit for the purpose." (Ex. D-3, p. 5). And in another part of his report, the eloquent Captain tells us of the time and labor needed to procure the trees and the amount "must be experienced before it can be appreciated." (*Ibid.*, at 4).

31. *Navigability:* The Great Salt Lake, as of January 4, 1896, was navigable within the meaning given to that word by the Federal courts for the purpose of determining a state's title to the bed of a body of water at statehood. This finding is not based in whole or in part on the doctrine of judicial notice [25] or the fact that the Lake has been meandered, but on the following:

(a) On January 4, 1896, the Lake was 30.2 feet deep or 4200.2 feet above sea level.

(b) As of that date, the Lake was physically capable of being used in its ordinary condition as a highway for floating and affording passage to water craft in the manner over which trade and travel was or might be conducted in the customary modes of travel on water at that time.

(c) If the need should have arisen on January 4, 1896, the Lake could have floated and afforded passage to large boats, barges and similar craft currently in general use on inland navigable bodies of water in the United States.

(d) The areas of the Lake which had a depth sufficient for the purposes in sub-paragraphs (b) and (c) above were not narrow or short channels, but were several miles wide, extending substantially through the length and width of the Lake, and covered an area of more than 1,000 square miles. A vessel could have traveled almost in a straight line from Monument Point located on the northwestern tip of the Lake to a point, where Silver Sand Beach is now located, at the southern edge.

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25. In this regard the Supreme Court of Utah has taken judicial notice that Great Salt Lake is navigable. See *Robinson v. Thomas*, 75 Utah 446, 286 Pac. 625 (1930); *Deseret Livestock Co. v. State of Utah*, 110 Utah 239, 191 P. 2d 401 (1946).

Part II.

Preliminary Statement.

While the State of Utah places its main reliance on the navigability of the Lake at the time of its admission on January 4, 1896, which the Special Master sets forth in Findings of Facts (Part I), nevertheless the Government maintains from the testimony adduced at the hearings that the Lake's susceptibility for use as a highway of trade and commerce, in the light of events since the State's admission into Statehood, is too conjectural and hypothetical to establish its navigability.

In *United States v. Utah, supra*, 283 U. S. at 83, the Court stated, with regard to the consideration of future commerce, ". . . [A]s the title of a State depends upon the issue, the possibilities of growth and future profitable use are not to be ignored. . . .

"The question remains one of fact as to capacity of the rivers in their ordinary condition to meet the needs of commerce as they may arise in connection with the growth of the population, the multiplication of activities and the development of natural resources. . . ."

It is apparent, with this quotation in mind, that the State of Utah has offered a great deal of testimony and many exhibits to forestall a finding for which the Government contends.

The Special Master here sets forth suggested Findings of Facts as developed by the testimony taken at the hearings, some favorable to the United States and some favorable to the State of Utah, in the same manner as the Findings of Facts (Part I) are here set forth, that is solely with the idea of putting in proper focus—and discarding the irrelevant—those facts which are pertinent to the issue. Some have a direct impact, some in the peripheral area,

with probably less pertinency, but all, in the Special Master's opinion, worthy of consideration.

There have been drawbacks and obstacles to commerce and trade by water craft on the Lake added to those that existed in 1896. However, a few of them have been minimized somewhat today. The density of the population centers within miles of the Lake, near which airports have sprung up, has increased; accessibility to its shores has been made easier; major highways have brought the motor vehicle within reach of the water's edge near the resorts; pleasure boats of all types for sailing on the Lake may now be ordered out of a catalog; and the versatile DUKW ("duck"), a former military amphibious truck, has decreased the effort needed to launch a boat and thereafter retract it by means of a trailer; gasoline or diesel engines have been in this era within reach of most boating fans and the radio can give advance warning of storms and summon aid to those in distress on the Lake. Industry has taken a new look at the treasures locked in the Lake, in its bed and environs, with an eye to profiting from them. Nevertheless the whole picture has not changed greatly.

Findings of Fact Subsequent to Statehood.

32. Five Counties in the State of Utah border on the Lake. They are Salt Lake on the southeast, Davis and Weber on the east, Box Elder on the north and northwest, and Tooele on the west and south.

33. *Level of the Lake:* At time of trial in May of 1969, the level of the Lake was 26 feet 3 inches (4,197.25 feet above mean sea level), a drop of 4 feet from the level at Statehood, and a drop of 14 feet 5 inches from the recorded high of 40 feet 8 inches (4,211.75 feet) in 1873. The low

point during the 119 years of its recorded elevation readings was reached in the latter part of 1963, when the water gauge read 20 feet 6 inches (4,191.5 feet). Since Statehood, the high was 34 feet (4,205 feet) in 1923, and although the level fluctuated within the years, the general trend has been downward (See Appendix B). As the level of the Lake decreases, the size and shape changes noticeably in most places. However, the deepest parts of the Lake have never been less than 20 feet, which depth is enough to float the largest vessel fully loaded that was ever used on the Lake.

34. *Climatic conditions:* In the seventy-three years since Statehood the highest temperature reading in the vicinity of the Lake was 107°F. in 1960, and the low was —18° F. in 1963. The highest yearly temperature has gone over the 100° mark 33 times and the lowest yearly temperature has fallen below zero 29 times. The average high is 101.08°F., and the average low, 1.47°F. The highest rain fall was 21.69 inches in 1922, and the lowest was 8.99 inches in 1966.[26] The average is 16 inches. Prevailing winds are westerly. The Lake will not begin to freeze, on the average, until its temperature drops to 18°F. above zero, a point seldom reached by the brine and even then only a scum of ice will form on the surface. There has been evidence of boats being caught in floating ice jams (Ex. D-3, p. 70), and being stuck fast (Ex. P-8, p. 21). These instances have been close to the eastern shore, near the estuaries of incoming streams, where the fresh water will float, especially in the cold season, above the brine for great distances, and where extensive cakes of ice sometimes drift out onto the Lake. (Ex. D-3, p. 152).

35. *Salt precipitation and encrustation:* When the Lake recedes near its low points, as it did in 1935, 1940 and 1960-

26. See Appendix C.

1967, the brine concentration becomes so great that precipitation of sodium chloride begins. It collects on objects in the water, including boats, and ofttimes interferes with moving parts such as the propeller or steering gear. "It is a phenomenon boatmen do not regard with extreme pleasure, for it makes anchoring difficult, slows boats as barnacles would and seals in centerboards. Objects placed in the Lake at such times clothe themselves in a coat of [beautiful white hard cubic] crystalline salt. . . ." (Ex. D-3, p. 211).

36. *Railroads and major highways near the Lake subsequent to 1896:*

(a) *Lucin Cutoff:* In 1902-04, the Southern Pacific Company built a railroad cutoff (shortcut) across the Lake, known as the Lucin Cutoff, dividing it into two northern sectors and one southern half. It starts at a point on the east shore directly west of Ogden and a mile north of the Ogden Bay Bird Refuge and cuts across the mouth of Bear River Bay in a slightly southeasterly direction in a straight line eight and one-half miles long until it reaches Promontory Point on the southeastern tip of the Promontory. Then it circles the tip of that land projection for a distance of about five miles until it reaches a point named Saline on the southwestern shore. From there it cuts straight across the neck of the northwestern arm of the Lake in a westerly direction for 20 miles until it reaches the west shore at Lakeside, at the base of the Lakeside Mountains, and a few miles south of Strong's Knob. The portion of the cutoff which crosses the mouth of Bear River Bay is rock-filed except for a 600 foot long trestle in the middle. The western sector consists of four miles of rock fill, then eleven to twelve miles of trestle, followed by four miles of rock fill. Its construction necessitated the use of 57,000 wooden piles 16 to 129 feet long, the use of seven tug boats, nine gasoline

launches, each capable of carrying from 15 to 35 persons, numerous small boats, and a wooden sternwheel steamer named "The Promontory", built on the Lake for that purpose. Depts of from 0 to 37 feet were encountered. This portion of track shortened the distance by almost 45 miles, eliminated most of the curves and steep grades on the Promontory, and cut off more than two hours of travel time to the Pacific Coast for the trains.

(b) In 1906-1908 the Western Pacific Railroad laid its tracks south of the Lake and across the Great Salt Lake Desert on the way to San Francisco. It can thus be seen that the railroads had somewhat of an effect on present and future capabilities of the Lake.

(c) *Railroad causeway:* Between the early part of 1957 and the first quarter of 1959, the Southern Pacific Company built a solid tapered causeway of rock and gravel across the Lake north of and parallel to the trestle portion of the Lucin Cutoff. It took approximately two years to build at a cost of $49,000,000. The causeway which was six hundred feet wide at its underwater base required 42,000,000 cubic yards of fill weighing 70,000,000 tons. Over ninety percent of the fill was carried by barges, the rest by rail car and truck. Since there were no nearby harbors, the railway company carved one out by dredging at Little Valley, a few miles northwest of Promontory Point. The entire construction required 600 men and 39 water craft. The boats alone cost $7,000,000. Construction went on day and night, six and sometimes seven days a week, in all seasons over the period of two years.

(d) Highways were constructed several miles from the east shore and connecting Brigham City with Ogden and the latter with Salt Lake City. In addition, highway Route U. S. 40 was extended west from Salt Lake City to a

point northwest of Saltair, then it follows the southeast shore of the Lake past the resorts, skirts the base of the Oquirrh Mountains, then southwest to Grantsville, and then goes northwest past the northern end of the Stansbury Mountain range.

37. *Summer resorts:* Today there are three resorts along the shores of the Lake: *Black Rock Beach, Sunset Beach* and *Silver Sands Beach.* Their main season is between Memorial and Labor Days. In 1904, the pavilion, pier and old "General Garfield" at Garfield Beach caught fire and were burned to the ground. Lake Park and Lake Side on the east shore were left in a sea of mud by the receding waters and have been abandoned. The pier at Saltair was extended sometime between 1914 and 1919. After a fire swept that resort in 1925, leaving only the piling, it was rebuilt. A year later the level of the Lake began to drop, and Saltair was "subjected to the humiliation of being left high and dry on its pilings"[27] miles from the water's edge. In 1933 *Black Rock Beach* was rebuilt. *Sunset Beach,* a 3½ acre tract lying immediately east of "New" Black Rock Beach, comprising a rocky island called Fritch Island, opened in July of 1934. *Silver Sands Beach* is a resort having a beach 2,000 feet long and 300 feet wide and a small breakwater. The shore in front has a slope of one to sixteen and the water is fifteen to twenty feet deep before the breakwater. These spots have the only good beaches on the entire shore of the Lake and were convenient for beach goers with automobiles. They also have the deepest channel coming to the shoreline of any place of the Lake.

38. *Boating and the resorts:* As long as their pier facilities and boat ramps remained over water, pleasure

27. Ex. D-3, p. 208.

boating and boating concessions were always a part of the business at the summer resorts. During its time, *Saltair*, above mentioned, had the best pier and collected fees from private owners of boats docking at its facilities. Exclusive of an occasional shipment of livestock from Antelope Island, the pier was used by boats mainly for pleasure. Excursion trips originated there, and some of these went to Hat or Bird Island, some 25 to 30 miles away. The size of boats involved ranged from rowboats to boats holding at least 50 people. Every year from 1934 to 1967 *Sunset Beach* has operated boats for hire, usually on a concession basis whereby the Beach operator received ten percent of the gross income from boat rides and rentals, which percentage rose to approximately $1,000 a year. The average boat used would carry from 12 to 15 passengers. In 1968, the County took over the resort. *Silver Sands Beach* is used as a place for commercial boat rides and sailboat launchings. Starting in 1963 the operator of this beach conducted narrated boating tours, lasting 20 to 45 minutes per trip, which proved to be popular, at a price of one dollar for adults and fifty cents for children. And since that time the operator's gross income has increased from $8,000 to $30,000 per year from boat passengers. For this purpose he had available 8 amphibious boats or converted army DUKW's and a launch having a capacity of from 30 to 35 people at one time. For most of its daylight boat passengers, this resort depended on the Greyline Bus Tours that stopped there with tourists. In the evenings, after the bus tours ceased, special parties would be taken any place they wanted to go on the Lake, depending on the amount of money they were willing to spend. On various occasions during the summer months, as many as 75 to 100 boats could be seen on the Lake at one time.

39. *Artificial harbors:*

(a) *Salt Lake County Boat Harbor:* In 1929, as the level of the Lake rose, the Great Salt Lake Yacht Club was organized. When incorporated in 1932, it opened a clubhouse beneath the south pier at Saltair. However, as stated in Exhibit D-3, p. 211: "The facilities at Saltair became increasingly less satisfactory as the lake shrank upon itself. It was difficult to reach the boats, for the increasing shallowness of the water necessitated anchoring farther and farther out from the pavilion. And even when the water was deep enough to allow the boats to come to the pier, there was no protection from waves and storms.

"The need clearly was for a harbor of some kind, and the yacht club began groping toward plans for building an encirclement of crib work at Saltair . . . . [A]ll plans were overturned by the swiftness with which the lake began sinking, the brine concentration became so great that precipitation of sodium chloride began. It collected on the boats moored near Saltair and substantially added to the difficulties of the club members.

"It was noticed that the water in the vicinity of Garfield and Black Rock did not precipitate salt on the beach because of a small inflow of fresh water from springs along the lake shore. Though the inflow was not great, it was sufficient to prevent salt precipitation over a two mile stretch of beach . . . . A site accordingly was chosen about a mile east of Fritch Island [the Sunset Beach location]."

In 1939, with the cooperative efforts of Salt Lake County, and the work relief administration of the Federal Government, this harbor was built. It is located a mile or so east of Sunset Beach, and 17.8 miles from Salt Lake City on Route U. S. 40. It consists of a solid "T" shaped breakwater with boat shelters along its side in a small dredged

channel. (See Ex. P-11.) The stem of the "T" connects with the highway and permits the passage of automobiles on its top surface. It accommodated up to about 50 boats at one time, including those of the County police. In 1942 from 75 to 100 boats, ranging from rowboats to large cabin cruisers, were using the harbor. However, "[t]here was insufficient space at the harbor for all who desired to operate boats on the lake, nor were the facilities adequate." (Ex. D-3, p. 211.) At time of trial the harbor and its facilities were not in the best of condition and sedimentation in the channel was causing a maintenance problem.

(b) *Little Valley Harbor:* This harbor is located on the west shore of the Promontory, a few miles north of Promontory Point. It was 1,500 feet long and 400 feet wide with a 2½ mile long channel to the deep part of the Lake. The Southern Pacific Railroad excavated this harbor in 1957, with floating dredges mainly to load barges with land fill for use in the construction of the solid causeway across the northwest arm of the Lake. The harbor was not difficult to dredge as the bed consisted of muck and clay with some scattered rock content. Presently the harbor is not in good condition and the entrance channel is also narrowing from sedimentation. (See Ex. P-29.)

40. *Bird Refuges on the shore of the Lake:* The shores of the Lake and some of its islands have long been the habitat, nesting ground and stopping place for a large number of water fowl and marsh related birds. This area is an important link in the Canadian-Mexico migratory bird route. As noted in Ex. P-31, p. 53-54: "As the pioneers expanded their agricultural operation in the valley and began to turn water from natural streams into their farmlands, marshes supporting the majority of the area's water fowl population began to dwindle. Tracts of surveyed land in the Bear

River area which were valuable for waterfowl management purposes were withdrawn from entry by the Federal Government in 1920. In 1923 construction was initiated in the State's public shooting ground utilizing part of the area withdrawn by the Government and private lands purchased for that specific purpose." Started in 1928 and completed in 1932, the Government established the 65,000 acre *Bear River Bird Refuge*, one of the finest in the world, upon the vast marsh lands of the Bear River delta on the east shore, west of Brigham City. Forty percent of this land was below the meander line, and the United States set aside an equal area of the refuge for free public hunting in season. The idea caught on and within a space of five years the State established three more bird refuges: *Locomotive Springs* in 1931, northwest of Monument Point; *Farmington Bay* in 1935, on the east shore, eight miles north of Salt Lake City; and *Ogden Bay* in 1937, also on the east shore, nine miles west of Ogden, on the Weber River delta.[28] In the 1950's, the United States paid the State $20,264.25 for the purchase from it of relicted land as part of the Weber Basin project. In 1964, the 12,000 acre *Willard Bay Waterfowl Management* area, just south of the Bear River Bird Refuge, was established with funds provided by the United States, in mitigation of loss of water fowl habitat caused by the construction of the Willard Reservoir. During peak use periods these marshes play host to over a million ducks. In addition the natural areas provide for 750,000 more. Waterfowl and marsh animal hunting is available to the public in season. Annually over 169,000 ducks and 3,000 geese (42% of the State's total) and 30,00 muskrats are harvested here. These wild life and bird sanctuaries presently and in the future offer a great attraction to the general public to travel on the Lake for viewing.

28. See Behle, *The Bird Life of Great Salt Lake* (1958), pp. 164-192 (Ex. P-30; Ex. P-1).

41. The United States spent at the request of the State, or has reimbursed the State, a total of $1,156,374.25 under the Pittman-Robinson Act. (Wildlife Conservation Act, 16 U. S. C. (1964) § 669 et seq.)

42. The setting aside by the United States of a portion of the Bear River Bird Refuge for free public hunting, and its payment to the State for the purchase of relicted land to be used as part of the Weber Basin project as well as the reimbursements under the Pittman-Robinson Act are relied upon by the State of Utah as a basis for its assertion that the United States should be estopped from denying Utah's title in this action.

43. The State of Utah has not shown any detriment or harm from any of the above acts of the United States.

44. *Antelope Island causeways:* This island has been connected with the shores of the Lake by two solid land-filled causeways. One of them traverses the shallow gap, which could be forded when the level of the Lake was low, between the southern tip of the island and the southeast shore. Construction on the other has been piecemeal, starting in 1954, and bridges the seven and one-half miles between the northeastern part of the island and the town of Syracuse on the eastern shore. This causeway has a surface forty-two feet wide, and its interspersed with culverts, permitting the passage of small boats when the level of the Lake is low.

45. *Harvesting of brine shrimp and brine shrimp eggs:* Since 1953, the Saunders Brine Shrimp Company has been harvesting brine shrimp and brine-shrimp eggs from various shallow sections of the Lake to be used as food for fish, especially tropical fish. Between the first of June and mid-

August the brine shrimp are retrieved by nets in an area off Antelope Island. Three air boats, 18 feet long and 6 feet wide, maneuverable in one to one-half foot of water and capable of carrying about 200 pounds of adult brine shrimp, are used in the gathering process. A 17-foot 50 horsepower outboard motor boat is also employed. Between mid-September and the end of November, the brine-shrimp eggs, which float on the surface and are washed up on the shoreline, are recovered by a four-wheel drive vehicle with scrapers and shovels. The catch is brought ashore and transported inland by truck to the processing plant near Salt Lake City, where the brine shrimps are frozen and placed in plastic bags, while the eggs are vacuum packed. In the best year 90,000 pounds of shrimp and 200,000 pounds of eggs were harvested, for which a royalty of $5,000 was paid to the State of Utah. The degree of the Lake's salt concentration affects the life of the brine shrimp.

46. *Boats on the Lake:* In this proceeding various water craft have been identified either by name, type, size, passenger capacity, use or name of the owner as having sailed upon the Lake during the period beginning 1824-1825 and ending in May of 1969. They total over 141 in number. The largest of these were six dump barges, each of which was 250 feet long, 55 feet wide and 12 feet, 4 inches deep at midship, being 2 feet deeper than that forward and aft, and were used in carrying material for the causeway in the 1957-1959 period and carried loads equivalent to that carried by 70 to 90 railroad cars. This type of vessel was superior to the kind customarily used on water like the Lake on January 4, 1896. Each of the barges was pushed by a tugboat of a thousand horsepower. Also used in this same construction were five deck barges, each 170 by 48 by 10 feet; pile driving barges; two twin-screw tugboats of 600 horsepower each, two dredges, three more tugboats of 200

horsepower; and a number of smaller boats. These boats, 39 in number, operated on the Lake in all seasons during the period of construction when the Lake level was between 26.5 feet (4,197.5 feet) and 24.5 feet (4,195.5 feet) deep, approximately 3.5 to 5.5 feet lower than at Statehood.

47. *Type of boats on the Lake:* The following are the types of water craft mentioned in the evidence as having sailed on the Lake:[29] (a) Rowboat, (b) bull boat, (c) scow, (d) skiff, (e) frigate, (f) sailboat, (g) sloop, (h) yawl, (i) schooner, (j) steamer or steamboat (sternwheel and sidewheel), (k) catamaran, (l) dory, (m) launch, (n) yacht, (o) DUKW or "duck", (p) Chris-Craft, (q) LCI, (r) airboat, (s) tugboat, (t) barge (deck, anchor, dump and pile driving), (u) float boat, (v) dredge, and (w) jet boat.

48. Water craft were identified in the evidence as having been used for transporting or hauling the following over the Lake:

(a) Passengers and workmen;

(b) Livestock such as cattle, sheep, horses and buffalo to and from Antelope and Fremont Islands;

(c) Grain;

(d) Lumber in the form of fence posts, cedar posts, railroad ties and telephone poles;

(e) Household supplies, flagstone, farm machinery, pump-station supplies;

(f) Material for the construction of the railroad trestles and causeways;

(g) Guano from Gunnison and Bird Islands to the mainland;

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29. For definitions, see Appendix E.

(h) Brine shrimp and brine-shrimp eggs;

(i) Ores, minerals and salt;

(j) Salt crystals and rocks; and

(k) Wild birds for Hogle Zoo.

49. The remaining identified craft were used for the following purposes:

(a) Exploration (3) and survey (2) of the Lake;

(b) Scientific investigation (5) and study of the Lake;

(c) Excursions (15), recreation (11), purely pleasure (3), and musical entertainment;

(d) Railroad maintenance and patrol of the trestle and causeway (4);

(e) Law enforcement patrol;

(f) Rescue operations;

(g) Harvest of brine shrimp and brine-shrimp eggs (4), and

(h) Publicity.

50. A number of the boats involved in the uses set forth above sailed on the Lake when its level was higher than 30 feet at Statehood. Yet these same boats could have sailed for like purposes had the need existed and were the Lake the same level as on January 4, 1896, with a few exceptions.

51. Not counting excursion trips, the boating uses of the Lake have been more of a private nature rather than by independent contractors for hire. Most of the boats on the Lake today are used privately and by the paying public for recreation and pleasure.

52. There was no evidence to show that any regularly scheduled freight or passenger service operated on the Lake.

53. *Antelope Island State Park:* The Utah Division of Parks and Recreation has created and is developing a 2,000 acre area at the north end of Antelope Island as a State Park. The plan envisions the construction of a 9-foot-deep marina estimated to cost $455,000, to accommodate 200 boats ranging in size from canoes to 45-foot crafts. The Division has awarded a concessionaire contract to the former operator of Sunset Beach, as the successful bidder, for the privilege of making boats available to the public for excursion tours and hire at the park.

54. *Great Salt Lake National Monument:* A bill has been introduced in the Senate (S. 25, 91st Cong., 1st Sess., Ex. P-15.) to establish Antelope Island as the Great Salt Lake National Monument and to be administered as a national park in accordance with the Act of August 25, 1916, 39 Stat. 535, 16 U. S. C. §§ 1-4. It is anticipated that this park, when completed, will attract a large number of tourists.

55. *Population centers near the Lake:* The region in the vicinity of the Lake, at least to the east and southeast, is well settled. In 1960, the numbers of persons in Davis County, Ogden and Salt Lake City, all of which are within twenty miles of the Lake, was approximately 325,000. This number comprised almost half the population of the State of Utah.

56. *Communities close to the Lake:* Except for Lakeside (not to be confused with former Lake Side) on the west shore of the Lake, which has a population of about fifty

people who maintain the tracks of the Southern Pacific Railway, there are no communities nearer than four miles of the Lake's waters. On the western and northern shores, except for Lakeside, there are no communities anywhere near the Lake within the State of Utah.

57. *Chemical compounds in the Lake:* The Lake has dissolved in it a number of chemical compounds (salts), which are valuable either in themselves or because certain elements are locked up in them. The soluble solids (99.43%) and their percentage by weight are as follows:

(a) Sodium Chloride (common table salt) ... 79.11%
(b) Magnesium chloride 9.95%
(c) Sodium sulphate (glauber salt) 6.22%
(d) Potassium sulphate 3.58%
(e) Calcium sulphate (lime sulphate) 0.57%

Others are potassium chloride, magnesium sulphate (epsom salt), potassium carbonate, sodium carbonate, and lithium chloride. The secret of profiting by them is to use an economical process of extracting, refining and transporting them to the market place. Common table salt (sodium chloride) was the first and still is the chief of the useful products derived from the brine. Extracting the salts from the brine is easy enough. The southeast shore is dotted with shallow open air ponds enclosed by dikes. The brine is first pumped into the ponds. As the sun and wind cause evaporation, the salts are deposited on the bottom of the ponds. "Ordinarily sodium chloride precipitates first, followed by potassium and magnesium chloride. When the salts that are wanted have reached the bottom, the remaining water is diverted to other ponds for further evaporation. Finally the minerals are harvested from the ponds' bottoms and refined." (*Business Week* (Oct. 15, 1966), pp.

94-96.) Sodium sulphate is used in the paper industry, magnesium in airplane building, chlorine as a bleaching and cleansing agent; magnesium sulphate in pharmaceuticals, dyes and explosives; and potassium for fertilizers. "In recent years, however, a number of business enterprises have shown interest in obtaining rights to produce magnesium, lithium and potash, and other substances of industrial value from the Lake's waters. Large areas of the adjacent upland flats are necessary for the large scale operations contemplated calling for the investment of many millions of dollars." (See Ex. P-34, p. 33.)

58. *Minerals in the Lake's bed:* Many compounds, containing minerals, are either known or their presence is indicated in the bed of the Lake. Calcium carbonate is widespread. Thin layers of sodium sulphate are buried at shallow depths in the sand at some localities. However, extraction of minerals from the bed has been small and intermittent. There is a possibility that oil and gas exist beneath the bed. Oil seeps are found at certain points. During the past fifteen years a total of 600,000 acres have been leased out by the State of Utah on a royalty basis for oil and gas exploration under the bed. A number of the major oil companies, such as Gulf, Humble and Superior, have participated in this venture.

59. *Minerals in the environs of the Lake:* Oolite sand deposits, used as a flux in the metal refining industry, are found at Lakeside. Dunes of this material, five to ten miles square and five to six feet thick, exist on the west and northwest section of the Stansbury peninsula. The State of Utah has issued leases on a royalty basis for its extraction. Dolomite, lithic sands, and pure limestone deposits, used in refractory material, may be unearthed all through the Lakeside, Newfoundland and Silver Mountains in the Desert.

Lowgrade (i.e., not commercially feasible to extract at present) phostatic beds, ten miles long and six feet deep, exist on the west side of the Terrace Mountains. At the surface of the Cedar and Grassy Mountains to the south and west of the Lake, ragonite, used in some building materials, exists. Copper, lead and silver are mined in the mountains to the south. These materials, when mined or gathered, are transported to the refineries and market place by truck and railroad.

60. *Diversions of water from tributaries of the Lake:* In 1965, 3,339,940 acre-feet of water have been diverted annually from streams flowing into the Lake and stored. In addition, there were substantial volumes of water diverted directly from these tributaries and consumptively used. According to the records of the Utah State engineer during the period 1949-59, the average yearly direct diversion and use was 1,395,351 acre-feet. When this figure is added to the above storage figure, the total direct annual diversion would equal 4,735,292 acre-feet of water. (Ex. P-31, p. 43-44.) There has been no testimony as to what effect this has on the annual level of the Lake.

61. *Artificial drawbacks and obstacles to travel and commerce on the Lake since Statehood:*

(a) Lucin Cutoff and the railroad causeway. These structures prevent the free travel of water craft of certain dimensions between Bear River Bay and the south portion of the Lake, and between the northwest arm with the south. Boats with beams greater than eleven feet have difficulty in passing through the trestle because of lateral clearance, especially when the level of the Lake is low. And when the level is high, boats have trouble in passing through the causeway culverts.

(b) The solid causeways connecting the tips of Antelope Island with the shore of the Lake prevent water craft from circling that island on the east, especially the one running from the northern top to the town of Syracuse. The culvert clearance was not shown.

(c) Unpredictability of the Lake's level and waterline is a factor in man's decision to build harbors and make improvements near the water's edge. Take, for example, Saltair, once a thriving beach resort along the Lake's front, now a desolate spot several miles inland.

(d) Uncertainty of title to the bed and exposed portions of the Lake's bed.

(e) The State of Utah has not made directly any expenditures for the construction and maintenance of a harbor on the Lake's shore, but it does plan to build a large marina on the northern top of Antelope Island. Beyond the assistance it gave in the construction of the Salt Lake County Boat Harbor, the United States has done nothing in the way of building or improving harbors on the Lake.

(f) Draining of sewage into the Lake.

(g) Diversion of water from the Lake's tributaries.

(h) Efforts on the part of both parties to this action to maintain the Lake's shores and some of its islands in their natural state by establishing, at great cost, wild water fowl sanctuaries.

62. While commerce and trade, unless pleasure boating be considered as such, has not flourished on the Lake, this is so not because, as the Government contends, the drawbacks and obstacles are too formidable, but rather, as the State maintains, the need, strong enough to overcome them,

has not arisen and commercial utilization on a large scale still awaits future improvements and demands.

63. *Artificial aids to travel on the Lake which may be implemented in the future:*

(a) Cutting out and maintaining of harbors in accessible locations on the shores of the Lake. The expense of doing this is relatively less than on other inland waterways customarily used for navigation because of the clay bottom with its low rock content, and the slow rate of silting or depositing of sediment by reason of the lack of tides and strong currents.

(b) Modifying of the Lucin Cutoff and solid causeways by the construction of draw or swing bridges of sufficient width.

(c) Increasing the extraction of large quantities of salt without greatly lowering the water volume.

(d) Enjoining the removal of water in large quantities by industry from the Lake.

(e) Enjoining the dumping of sewage into the Lake.

(f) Settlement of title to the Lake's bed and the relicted lands.

64. The lands conveyed to the State of Utah on June 15, 1967, pursuant to the Act of June 3, 1966 (80 Stat. 192), includes all of the lands below the meander line of Great Salt Lake as depicted on the map attached to the Stipulation filed by the parties in this action.

IV.

CONCLUSIONS OF LAW.

1. A state upon its admission into the Union acquires by virtue of its sovereignty whatever title to the beds of all navigable bodies of water within its borders possessed by the United States and not conveyed away by it prior to Statehood. This title, however, is subservient to the right of the Federal government to regulate such waters for the purpose of navigation.

2. The determination of the question of navigability, when asserted by a State as the foundation of its title to lands underlying bodies of water, is to be resolved on the basis of law recognized and applied by the Federal courts.

3. In any proceeding in the Federal courts involving the question of navigability of a body of water, the burden of proof is on the proponent of navigability.

4. The test for determining navigability under the Federal law, when asserted by a State as the basis of its title to land underlying bodies of water, must be determined as of the date of the admission of the State into the Union.

5. That test is one of fact regarding the capacity or susceptibility of the waters in their natural state, or ordinary condition, of being used, as the need may arise, by the then customary modes of trade and travel for useful commerce.

6. This capacity may be shown by (1) the actual use to which the water was put at the critical time, no matter in what mode the commerce may have been conducted;

(2) the physical characteristics of the body of water in question; (3) the actual uses to which the body of water has been put, either before or after the critical date, if it can be said that these uses could have been conducted on the body of water in its natural state or condition, and (4) experimentation demonstrating capacity.

7. The use of boats by their owners to carry livestock back and forth from Antelope and Fremont Islands to the shores of Great Salt Lake in connection with their business operations, as well as the use of such boats to carry supplies to these islands, and the hauling of guano from Gunnison and Bird Islands to the shores of the Lake can be deemed to show the utility of the waters for commerce to the general public.

8. The use of boats for the construction and maintenance of railroad trestles and causeways across Great Salt Lake, for the exploration and scientific study of the Lake, and for police patrol activities and rescue operations constitute trade and travel in the customary modes of trade and travel on water.

9. Boating for purposes of recreation and pleasure when conducted on vessels of the size and character shown in the evidence is useful commerce within the meaning of navigability.

10. The fact that the body of water in question is not capable for use for navigation in interstate or foreign commerce will not defeat a State's claim of title to the bed of that body of water.

11. The fact that the navigability of the body of water in question is beset with difficulties will not defeat a State's claim of title to the bed of that body of water.

12. The State of Utah is not estopped from asserting and offering proof that it had title to the bed of Great Salt Lake as of January 4, 1896.

13. Assuming that Great Salt Lake was not navigable on January 4, 1896, the United States should not be estopped from opposing the State of Utah's claim of title and asserting title in itself.

14. Great Salt Lake on the date of the State of Utah's admission into the Union was navigable under the laws of the United States.

15. On January 4, 1896, title to the bed of Great Salt Lake vested in the State of Utah, and did not remain in the United States.

16. The State of Utah is entitled to a decree by this Court quieting title to the bed of Great Salt Lake in itself as against the United States.

17. The United States is not entitled to a decree quieting title to the bed of Great Salt Lake in itself as against the State of Utah.

18. The State of Utah is not required to pay the United States for the land covered by Great Salt Lake and below the boundary line of the Lake's bed as of January 4, 1896.

19. Unless the parties to this action otherwise stipulate or agree, all issues relating to the exact boundaries of the bed of Great Salt Lake, as of January 4, 1896, are to be reserved for subsequent determination by this Court.

V.

PROPOSED DECREE.

The State of Utah has not submitted a recommended decree for the signing by this Court. In such absence, the Special Master proposes the following decree:

IT IS ORDERED, ADJUDGED AND DECREED THAT:

1. The United States of America, its departments and agencies, are enjoined, subject to any regulations which the Congress may impose in the interest of navigation or pollution control, from asserting against the State of Utah any claim of right, title and interest:

(a) to the bed of the Great Salt Lake lying below the meander line of Great Salt Lake as duly surveyed heretofore or in accordance with Section 1 of the Act of June 3, 1966, 80 Stat. 192, with the exception of any lands within the Bear River Migratory Bird Refuge and the Weber Basin federal reclamation project,

(b) to the natural resources and living organisms in or beneath the bed of the Great Salt Lake as delineated in (a) above, and

(c) to the natural resources and living organisms either within the waters of the Great Salt Lake, or extracted therefrom, lying below the meander line of the Great Salt Lake, as delineated in (a) above, except brine and minerals in solution in the brine or precipitated or extracted therefrom in whatever federal lands there may be below said meander line, together with the right to prospect for, mine, and remove the same, as set forth in Section 3 of the Act of June 3, 1966, 80 Stat. 192.

2. The State of Utah is not required to pay the United States, through the Secretary of the Interior, for the lands, including any minerals, lying below the meander line of the Great Salt Lake, as delineated in 1(a), above, of this decree.

3. The prayer of the United States of America in its Answer to the State of Utah's Complaint that this Court "confirm, declare and establish that the United States is the owner of all right, title and interest in all the lands described in Section 2 of the Act of June 3, 1966, 80 Stat. 192, as amended by the Act of August 23, 1966, 80 Stat. 349, and that the State of Utah is without any right, title or interest in such lands, save for the right to have these lands conveyed to it by the United States, and to pay for them, in accordance with the provisions of the Act of June 3, 1966, as amended," is denied.

Respectfully submitted,

J. CULLEN GANEY,
Senior Circuit Judge,
Special Master.

VI.

APPENDIX.

DOCKET ENTRIES.

Mar. 1, 1967. Motion for leave to file bill of complaint filed.

May 1, 1967. Response to motion for leave to file complaint filed.

May 3, 1967. Motion for leave to file bill of complaint distributed.

May 15, 1967. Motion for leave to file bill of complaint granted and the United States is allowed sixty days to answer.

Jun. 5, 1967. Appointment of Special Master distributed.

Jun. 12, 1967. Ordered that the Honorable J. Cullen Ganey, Senior Judge of the United States Court of Appeals for the Third Circuit be, and he is hereby appointed Special Master in this case. See ORDER. [388 U. S. 902.]

Jun. 15, 1967. Oath of Special Master filed.

Jul. 14, 1967. Answer filed.

Sept. 18, 1967. Motion of Morton International, Inc. to intervene as defendant and file answer filed.

Oct. 11, 1967. Above Motion distributed.

Oct. 23, 1967. Motion of Morton International, Inc., for leave to intervene and file answer is referred to Special Master. Marshall, J., OUT. [389 U. S. 909.] Counsel for Morton International: Martin Jacobs, Myer Feldman, L. M. McBride, Frank A. Wollaeger.

Jan. 25, 1968. Brief of the State of Utah in opposition to motion by Morton International, Inc. for leave to intervene and answer filed.

Jan. 26, 1968. Motion of Great Salt Lake Minerals & Chemicals Corporation to intervene as a plaintiff, and its complaint filed.

Feb. 5, 1968. Reply brief of Morton International, Inc. to brief of State of Utah in opposition to motion of Morton International, Inc. for leave to intervene, filed.

Feb. 7, 1968. Motion of Great Lake Minerals & Chemicals Corporation for leave to intervene distributed.

Feb. 15, 1968. Joint motion for order directing manner of payment of Special Master's expenses filed. (NP).

Feb. 19, 1968. Supplemental motion of Great Salt Lake Minerals & Chemicals Corporation to intervene as a defendant, and its answer and cross claim filed.

Feb. 20, 1968. Memorandum for United States filed.

Feb. 20, 1968. Reply memorandum for United States filed.

Feb. 21, 1968. Supplemental motion of Great Salt Lake Minerals & Chemicals Corporation to intervene as a defendant, and its answer and cross claim distributed. Also joint motion for order directing manner of payment of Special Master's expenses distributed.

Feb. 21, 1968. Memorandum for U. S. in response to motion and amended motion of Great Salt Lake Minerals & Chemicals Corporation filed.

Feb. 24, 1968. Brief of the State of Utah in response to reply brief of United States, etc.

Mar. 5, 1968. Motion of Great Lake Minerals & Chemicals Corp. for leave to intervene distributed. Also supplemental motion of Great Salt Lake Minerals & Chemicals Corp. to intervene as a defendant and its answer and cross claim distributed. Also joint motion for order directing manner of payment of Special Master's expenses distributed.

Mar. 11, 1968. Joint motion for order directing manner of payment of Special Master's expenses *withdrawn.*

Mar. 11, 1968. Motions of the Great Salt Lake Minerals & Chemicals Corp. for leave to intervene as a plaintiff and to intervene, in the alternative, as a defendant, together with its answer and cross claim are referred to the Special Master for a report and recommendation. Such report and recommendation shall also include the motion of the Morton International, Inc., for leave to intervene heretofore referred to the Special Master, Marshall, J., Out. [390 U. S. 977.]

Apr. 16, 1968. Brief of Morton International, Inc. in response to stipulation and supplemental memorandum for the United States filed.

Apr. 17, 1968. Memorandum of Great Salt Lake Minerals & Chemicals Corp. regarding Stipulation between U. S. and State of Utah filed. Counsel for intervenor: Raymond T. Senior, Claron C. Spencer.

Apr. 22, 1968. Supplemental memorandum for U. S. and stipulation filed.

May 17, 1968. Joint motion for leave to file stipulation filed.

May 20, 1968. Waiver of right to file response to joint motion for leave to file stipulation by Morton International, Inc., filed.

May 21, 1968. Waiver of right to file response to joint motion for leave to file stipulation by Great Salt Lake Minerals & Chemicals Corp. filed.

May 22, 1968. Joint motion for leave to file stipulation distributed.

Jun. 3, 1968. Joint motion for leave to file a stipulation, etc., referred to Special Master. Marshall, J., OUT. [391 U. S. 962.]

Oct. 28, 1968. Report of Special Master filed. Exceptions, if any, may be filed by the parties within 45 days. Reply briefs, if any, may be filed within 30 days thereafter, Marshall, J., OUT.

Dec. 11, 1968. Exceptions of Morton International, Inc. to Report of Special Master and supporting brief filed.

Dec. 13, 1968. Motion of Great Salt Lake Minerals & Chemicals Corporation for leave to file memorandum in lieu of exceptions to Report of Special Master filed.

Dec. 24, 1968. Exceptions of Morton International, Inc. to Report of Special Master distributed. Also motion of Great Salt Lake Minerals and Chemicals Corporation for leave to file memorandum in lieu of exceptions to Report of Special Master distributed.

Jan. 9, 1969. Motion and order extending time to file reply. (Until 1-21-69).

Jan. 13, 1969. Brief of the State of Utah in support of the Special Master's Report filed.

Jan. 21, 1969. Memo of U. S. on report of Special Master and exceptions thereto by Morton International filed.

Jan. 22, 1969. Exceptions of Morton International, Inc. to Report of Special Master distributed. Also motion of Great Salt Lake Minerals & Chemicals Corp. for leave to file memorandum in lieu of exceptions to Report of Special Master.

Feb. 25, 1969. Above redistributed.

Mar. 3, 1969. Determination of the Report of Special Master denying intervention to Morton International, Inc., approved. See ORDER. [394 U. S. 89.]

Appendix A.

UNITED STATES DISTRICT COURT
OFFICE OF THE CLERK
DISTRICT OF UTAH
SALT LAKE CITY, UTAH 84101

October 23, 1969

ANDREW JOHN BRENNAN
Clerk

Honorable J. Cullen Ganey
Senior United States Circuit Judge
United States Court of Appeals
For the Third Circuit
3030 United States Court House
Philadelphia, Pa. 19107

Dear Judge Ganey:

In reply to your letter of October 16, 1969, be advised that I have not been able to locate any admiralty action filed in this Court.

Enclosed are copies of Findings of Fact and Conclusions of Law, Judgment and Decree issued on December 14, 1960, by the Honorable Willis W. Ritter, Chief Judge of this Court, in the case of United States of America vs. State of Utah, et al, (C 137-59). This case involves navigability of a river and is, of course, not in any sense an admiralty action. Judge Ritter's decision was affirmed and is reported as State of Utah vs. United States of America, 304 F. 2d 23.

There are other cases regarding navigability of waters in Utah, including Great Salt Lake, among which are:

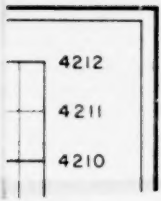
Robinson vs. Thomas, 75 Ut. 446, 286 P. 625
Monroe vs. State, 111 Utah 1, 175 P. 2d 759
United States vs. Utah, 51 S. Ct. 438, 283 U. S. 64, 75 L. Ed. 844.

It is a pleasure to be of service to your Honor. This office acts as the Clerk for both Divisions in the District of Utah.

Respectfully,

ANDREW JOHN BRENNAN
Andrew John Brennan, Clerk
United States District Court

AJB:am
enclosure



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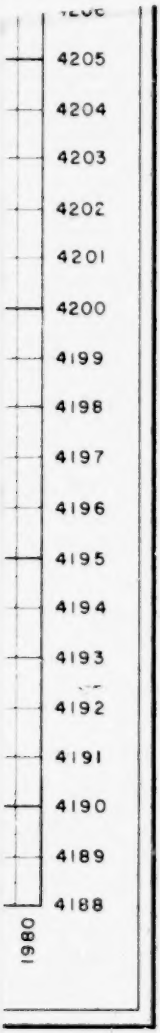

Appendix C.

(Letterhead of)
U. S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
WEATHER BUREAU FORECAST OFFICE
175 North 2300 West, Room 118
Salt Lake City, Utah 84116

April 7, 1970

Honorable J. Cullen Ganey
United States Court of Appeals
for the Third Circuit
3030 United States Courthouse
Philadelphia, Pennsylvania 19107

My dear Judge Ganey:

Your letter dated March 19, 1970 went through a number of other offices before reaching the Salt Lake City Weather Bureau. I am very sorry for the delay in answering your request.

It has been difficult to locate early records regarding the temperature of Great Salt Lake. Enclosed is a copy of a study containing some early data which was furnished by R. J. Madison, Hydrologist with the U. S. Geological Survey in Salt Lake City.

We do have official record of data that you requested regarding the temperature and precipitation at Salt Lake City from 1896 to 1969, which has been tabulated and is enclosed with this letter.

Respectfully yours,
WILLIAM T. CHAPMAN
William T. Chapman
Meteorologist in Charge

Enclosures

UNITED STATES DEPARTMENT OF COMMERCE

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

Weather Bureau Forecast Office

Station Salt Lake City, Utah *Date* April 7, 1970

I hereby certify that records of the Environmental Science Services Administration indicate: that the maximum temperature for January 4, 1896 was 34°F, and the minimum temperature was 9°F. The average pressure for the day was 25.977 inches of mercury.

WILLIAM T. CHAPMAN,
Meteorologist in Charge.

UNITED STATES DEPARTMENT OF COMMERCE

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

Weather Bureau Forecast Office

Station Salt Lake City, Utah *Date* April 7, 1970

I hereby certify that records of the Environmental Science Services Administration indicate: the annual maximum and minimum temperatures, and precipitation for the years 1896 to 1969 are as follows:

Year	Temperature		Total	Year	Temperature		Total	Year	Temperature		Total
	High	Low	Precip		High	Low	Precip		High	Low	Precip
1896	97	–2	18.42	1921	99	12	14.45	1946	100	11	16.51
1897	98	2	16.74	1922	98	–7	21.69	1947	101	3	17.86
1898	97	–3	16.09	1923	95	4	18.96	1948	99	6	15.43
1899	97	–10	17.57	1924	97	–8	13.86	1949	101	–7	15.75
1900	101	2	11.53	1925	103	12	17.17	1950	99	–3	13.45
1901	101	4	16.08	1926	101	8	15.61	1951	101	–3	17.50
1902	98	–4	11.41	1927	100	8	20.69	1952	100	–1	15.14
1903	98	–4	14.62	1928	100	9	12.10	1953	101	10	12.32
1904	97	6	16.31	1929	99	–1	14.47	1954	102	7	12.43
1905	97	–4	14.23	1930	100	–4	15.73	1955	102	–14	13.63
1906	96	7	21.28	1931	105	5	11.40	1956	101	–3	12.39
1907	95	13	19.22	1932	97	–8	14.88	1957	99	–2	18.44
1908	95	6	20.85	1933	101	–10	11.11	1958	102	6	10.72
1909	101	4	19.68	1934	103	14	14.29	1959	101	–1	13.82
1910	96	1	11.25	1935	99	2	12.96	1960	107	–4	12.37
1911	96	6	15.13	1936	101	2	17.75	1961	104	–10	11.75
1912	94	6	19.19	1937	102	–11	14.54	1962	101	–14	14.90
1913	97	–2	16.69	1938	102	14	16.41	1963	102	–18	14.09
1914	97	11	16.69	1939	103	7	10.68	1964	101	–10	17.87
1915	98	5	14.49	1940	103	9	18.58	1965	98	3	18.43
1916	99	2	16.06	1941	102	14	21.24	1966	102	–3	8.99
1917	97	2	14.17	1942	101	–2	16.12	1967	101	2	16.52
1918	101	4	16.11	1943	103	4	12.81	1968	102	0	21.11
1919	100	0	13.42	1944	100	7	18.87	1969	99	1	16.09
1920	98	8	21.56	1945	98	11	18.82				

WILLIAM T. CHAPMAN,
Meteorologist in Charge.

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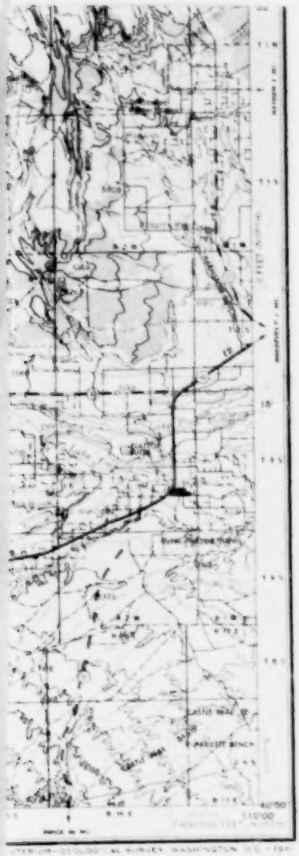

SECTIONIZED TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

SALT LAKE CITY, UTAH, WYOMING

1954

Appendix E.

Definition of Water Craft.

Catamaran (Kăt′.a.ma.ran′): Any vessel with twin hulls side by side.

Dory (dō.rĭ): A flat-bottomed boat with flairing sides.

DUKW (or "duck"): The code designation for a 2½-ton 6-wheel-drive truck equipped with a propeller and watertight hull for ferrying, lighter service, or amphibious landing of troops. (See Ex. P-14.)

Frigate (frig′.it): A light vessel propelled by sail and oars.

Launch: An open, or largely undecked, power-driven boat.

LCI: A 50 to 60 foot long military landing craft, for infantry.

Schooner (skōō′.ner): A fore-and-aft rigged vessel, typically having two masts, with the smaller sail on the foremast and the mainmast stepped nearly amidships.

Scow: A large flat-bottomed boat, with broad, square ends, used as a lighter.

Skiff: A boat with centerboard and spiritsail, light enough to be rowed.

Sloop: A fore-and-aft rigged vessel with one mast and a single headsail jib.

Yacht (yŏt): Any one of various types of relatively small vessels, characteristically with sharp prow and graceful lines, and ordinarily used for pleasure.

Yawl: A fore-and-aft rigged vessel carrying a mainsail and one or more jibs, with mizzenmast fore and aft.

INDEX

	Page
Exceptions of the United States to the Report of the Special Master filed October 26, 1970	1
Brief of the United States in Support of Exceptions to the Report of the Special Master filed October 26, 1970	7
Report of the Special Master	7
Questions presented	7
Statement	8
Summary of argument	12
Argument:	
I. Governing Legal Principles With Respect To Navigability in Fact	14
II. The Great Salt Lake Is Not Navigable In Fact	20
III. Exceptions To The Master's Findings Of Fact And Conclusions Of Law With Respect To The Lake's Navigability In Fact	25
IV. The Great Salt Lake Is Not Navigable In Law For State Title Purposes Because It Has No Interstate Or Foreign Connection	29
Conclusion	34

CITATIONS

Cases:

Barney v. *Keokuk*, 94 U.S. 324 ..... 15, 32, 23

Brewer-Elliott Oil and Gas Co. v. *United States*, 260 U.S. 77 ..... 14, 17, 19

Builders Supply Co., In re, 278 F. Supp. 254 .. 34

Daniel Ball, The, 10 Wall. 557 .... 12, 16, 19, 20

413-348—71——1

Cases—Continued

	Page
Deseret Livestock Co. v. *State*, 110 Utah 239, 171 P.2d 401	14
Economy Light Co. v. *United States*, 256 U.S. 113	18
Garrett, In re, 141 U.S. 1	16
Hardin v. *Jordan*, 140 U.S. 371	32
Harrison v. *Fite*, 148 Fed. 781	14, 17
Illinois Central R. Co. v. *Illinois*, 146 U.S. 387	32
Iowa-Wisconsin Bridge Co. v. *United States*, 84 F. Supp. 852	14
Johnson v. *O'Neill*, 105 Law Times Rep. 587	32
Madsen's Petition, In Re, 187 F. Supp. 411	34
Marine Office of America v. *Manion*, 241 F. Supp. 621	34
Martin v. *Waddell*, 16 Pet. 367	31
Montello, The, 11 Wall. 411	16, 32, 34
Moore v. *American Transp. Co.*, 24 How. 1	16
Oklahoma v. *Texas*, 258 U.S. 574	17, 19
Philadelphia Light Co. v. *Stimson*, 223 U.S. 605	18
Pollard's Lessee v. *Hagan*, 3 How. 212	15, 31, 33
Poynter v. *Chipman*, 32 Pac. 690	34
Propeller Genesee Chief, The v. *Fitzhugh*, 12 How. 442	15, 32, 33
Robert W. Parsons, The, 191 U.S. 17	18
Robinson v. *Thomas*, 75 Utah 446, 286 Pac. 625	14
Shively v. *Bowlby*, 152 U.S. 1	19, 33
Shogry v. *Lewis*, 225 F. Supp. 741	34
Steamboat Orleans, The, 11 Pet. 175	32
Steamboat Thomas Jefferson, The, 10 Wheat. 175	32
United States v. *Appalachian Power Co.*, 311 U.S. 377	19
United States v. *Holt Tank*, 270 U.S. 49	14, 17

Cases—Continued

Page

United States v. *Oregon*, 295 U.S. 1 ..... 14, 17–18, 19, 30

United States v. *Utah*, 283 U.S. 64 ..... 16, 17, 19, 20, 22, 30, 32

United States Constitution and statutes:

U.S. Const., Art. IV, Sec. 3, Cl. 2 33

Act of June 3, 1966, 80 Stat. 192 8

Submerged Lands Act of 1953, 67 Stat. 29, 43 U.S.C. 1301 *et seq.*:

43 U.S.C. 1301(a) 34

43 U.S.C. 1311 34

33 U.S.C. 2.10–5 19

33 U.S.C. 2.10–5(a) 16

In the Supreme Court of the United States

OCTOBER TERM, 1970

No. 31, Original

STATE OF UTAH, PLAINTIFF

v.

UNITED STATES OF AMERICA

EXCEPTIONS OF THE UNITED STATES TO THE REPORT OF THE SPECIAL MASTER FILED OCTOBER 26, 1970

Pursuant to the order of the Court,[1] the United States presents the following exceptions to the Report of the Special Master filed October 26, 1970:

I

With respect to the Conclusions of Law of the Special Master appearing at pages 50–52 of his Report:

[1] On October 26, 1970, the Court ordered: "The report of the Special Master is received and ordered filed. Exceptions, if any, with supporting briefs, shall be filed within sixty days." On December 21, 1970, the Court extended the time for filing the exceptions and supporting brief of the United States to and including January 8, 1971. The Report of the Special Master is referred to herein as "R".

1. The United States excepts to the declaration in Conclusion of Law 5 that the "test [for determining navigability] is one of fact regarding the capacity or susceptibility of the waters being used, as the need may arise, by the then customary modes of trade and travel for useful commerce" (R. 50).

2. The United States excepts to the ruling in Conclusion of Law 6 that the capacity of the Lake for useful commerce "may be shown by * * * (2) the physical characteristics of the body of water in question; * * * and (4) experimentation demonstrating capacity" (R. 50–51).

3. The United States excepts to the determination in Conclusion of Law 7 that the "use of boats by their owners to carry livestock back and forth from Antelope and Fremont Islands to the shores of Great Salt Lake in connection with their business operations, as well as the use of such boats to carry supplies to these islands, and the hauling of guano from Gunnison and Bird Islands to the shores of the Lake can be deemed to show the utility of the waters for commerce to the general public" (R. 51).

4. The United States excepts to the determination in Conclusion of Law 8 that the "use of boats for the construction and maintenance of railroad trestles and causeways across Great Salt Lake, for the exploration and scientific study of the Lake, and for police patrol activities and rescue operations constitute trade and travels in the customary modes of trade and travel on water" (R. 51).

5. The United States excepts to the determination in Conclusion of Law 9 that "[b]oating for purposes of recreation and pleasure when conducted on vessels of the size and character shown in the evidence is useful commerce within the meaning of navigability" (R. 51).

6. The United States excepts to the holding in Conclusion of Law 10 that the "fact that the body of water in question is not capable for use for navigation in interstate or foreign commerce will not defeat a State's claim of title to the bed of that body of water" (R. 51).

7. The United States excepts to the ruling in Conclusion of Law 14 that "Great Salt Lake on the date of the State of Utah's admission into the Union was navigable under the laws of the United States" (R. 52).

8. The United States excepts to the ruling in Conclusion of Law 15 that "[o]n January 4, 1896, title to the bed of Great Salt Lake vested in the State of Utah, and did not remain in the United States" (R. 52).

9. The United States excepts to the ruling in Conclusion of Law 16 that the "State of Utah is entitled to a decree by this Court quieting title to the bed of Great Salt Lake in itself as against the United States" (R. 52).

10. The United States excepts to the ruling in Conclusion of Law 17 that the "United States is not entitled to a decree quieting title to the bed of Great Salt Lake in itself as against the State of Utah" (R. 52).

11. The United States excepts to the ruling in Conclusion of Law 18 that the "State of Utah is not required to pay the United States for the land covered by Great Salt Lake and below the boundary line of the Lake's bed as of January 4, 1896" (R. 52).

II

With respect to the Findings of Fact of the Special Master appearing at pages 9–49 of his Report:

1. The United States excepts to the determination in Finding of Fact 31 that the "Great Salt Lake, as of January 4, 1896, was navigable within the meaning given to that word by the Federal courts for the purpose of determining a state's title to the bed of a body of water at statehood," (R. 29), inasmuch as it states a legal conclusion as to the "navigability" of the Lake at statehood.

2. The United States excepts to the determination in Finding of Fact 62 that "[w]hile commerce and trade, unless pleasure boating be considered as such, has not flourished on the Lake, this is so not because, as the Government contends, the drawbacks and obstacles are too formidable, but rather, as the State maintains, the need, strong enough to overcome them, has not arisen and commercial utilization on a large scale still awaits future improvements and demands" (R. 48–49).

III

The United States excepts to the Proposed Decree of the Special Master appearing at pages 53–54 of his Report, insofar as it grants the relief sought by the State of Utah and denies the relief sought by the United States.

Respectfully submitted.

ERWIN N. GRISWOLD,
Solicitor General.

JANUARY 1971.

413-348—71——2

In the Supreme Court of the United States

OCTOBER TERM, 1970

No. 31, Original

STATE OF UTAH, PLAINTIFF

v.

UNITED STATES OF AMERICA

BRIEF OF THE UNITED STATES IN SUPPORT OF EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER FILED OCTOBER 26, 1970

REPORT OF THE SPECIAL MASTER

The Report of the Special Master was filed in this Court on October 26, 1970. On that same date, the Court ordered that exceptions to the Report, with supporting briefs, be filed within sixty days. On December 21, 1970, the Court extended the time for filing the exceptions and supporting brief of the United States to and including January 8, 1971. The Court has original jurisdiction.

QUESTIONS PRESENTED

1. Whether for the purpose of determining ownership of the bed of the Great Salt Lake, the Lake was navigable in fact as a highway of commerce at the time of Utah's admission to the Union.

2. Whether for such purpose the Lake was navigable in law as a highway of interstate or foreign commerce.

STATEMENT

This original action was filed by the State of Utah [2] to quiet in it title to the bed of the Great Salt Lake. The only question presently before this Court is whether at the time of Utah's admission to the Union (January 4, 1896) the Great Salt Lake was navigable, as Utah contends, or was nonnavigable, as the United States contends.[3] That question was referred to a Special Master, 394 U.S. 89, 96, who held hearings concerning the question of navigability in fact and considered arguments directed to the conclusions to be drawn from the evidence presented. In those hearings, the United States reserved but did not argue the proposition that the Lake was non-navigable as a

[2] The litigation was brought pursuant to the Act of June 3, 1966, 80 Stat. 192. Pursuant to that statute, the United States quitclaimed to the State of Utah all its title and interest (with certain exceptions not here relevant) to the bed of the Great Salt Lake. Utah in turn is to pay the United States the value of the property so conveyed, unless it establishes that it, rather than the United States, was the rightful owner of the Lake bed prior to the conveyance from the United States; it is for this purpose that Utah initiated this action.

[3] Should the United States prevail on this issue, this litigation would be ended, since the sole basis of Utah's claim is that the lands now in dispute were, at the relevant time, the bed of a *navigable* body of water and, as such, passed to Utah upon its statehood. On the other hand, if Utah prevails further proceedings will be necessary to determine other issues, notably whether the State has lost its original title by operation of the law of "reliction" to those portions of the former Lake bed which since have become exposed.

matter of law because it forms no part of a water route in interstate or foreign commerce. See pp. 29–34 *infra*. The Special Master has now prepared and filed with the Court his Report, to which the exceptions herein stated are directed.

The government's exceptions are principally to the Special Master's conclusions of law. We contend, as is more fully explained below, that the measure of navigability in fact for state title purposes is whether at the time of statehood the waterway was used or susceptible of being used, in its ordinary condition, as a highway of commerce over which trade and travel are or may be conducted in the customary modes of trade and travel on water.

In general, we do not disagree with the Special Master's findings of the facts to which this test is to be applied.[4] In summary, those findings indicate the following:

The Great Salt Lake is located entirely in the State of Utah (Finding of Fact 5, R. 10). In 1896, it had a maximum length of approximately 77 miles, a maximum width of 32.5 miles, and a maximum depth of about 30 feet (Finding of Fact 6, R. 10). The Lake is a drainage spot for a large area; it has no outlet, and as a result a high concentration of soluble solids (salts) exists (Findings of Fact 13 and 16, R. 18, 19). The tributary rivers flowing into the Lake do not provide a navigable water link with any other state or country (Finding of Fact 24, R. 24). Except in a few places, the Lake's shores and bed gently shelve at the

[4] But see p. 4, *supra*.

rate of about one foot per thousand feet (Findings of Fact 8 and 11, R. 13, 17). The gradual shelving of the basin and the softness of the shore surface make it unusually difficult to get boats from dry land into floatable water—to reach water five feet deep, one must move out a mile or more from the water's edge (Finding of Fact 26(a), R. 25). The Lake's flat, barren, bleak, and treeless shores are ringed with great stretches of salt flats, salt marshes, and bogs, some of which are in places several miles in width (Finding of Fact 18, R. 20–21), and which make an approach to its shores by foot, horseback, or horsedrawn vehicle very difficult (Finding of Fact 27(a), R. 27). The Lake affords no convenient locations for launching or landing boats (Finding of Fact 26(d), R. 26). Although since 1850 there have been sizable settlements within several miles of the Lake (Finding of Fact 19, R. 21), in 1896 none of these population centers were within ten miles of the Lake's shore (Finding of Fact 28, R. 28). Except for Lakeside, a community of about fifty people who maintain the tracks of the Southern Pacific Railway over the Lake, even today there are no communities nearer than four miles to the Lake's water (Finding of Fact 56, R. 44–45). And though there have been boats on the Lake (Findings of Fact 36(a), 36(c), 38, 45, 46, 47, 48 and 49, R. 33–34, 35–36, 40–43), the boating uses of the Lake, not counting excursion trips, have been more of a private nature than by independent contractors for hire (Finding of Fact 51, R. 43). There is no evidence indicating that any regularly scheduled freight or pas-

senger service ever operated on the Lake (Finding of Fact 52, R. 44). The high salt concentration results in disagreeable salt spray from the waters of the Lake and in precipitation and encrustation of sodium sulphate in the Lake and on objects in the water, including boats (Findings of Fact 26 (f), (g), 35, and 39(a), R. 26–27, 32–33, 37–38).

The Special Master found that factors favoring travel on the Lake are that its level remains relatively constant and changes only gradually;[5] water depths of 5 to 30 feet exist over wide areas; there are no underwater obstructions or floating obstacles; the surface is calm and no tides or strong currents are present; and the high salt concentration significantly increases the water's buoyancy and lowers its freezing point (Finding of Fact 25, R. 24). The Master also found that while commerce and trade have not flourished on the Lake, this is because a sufficient need for such use has not yet arisen; commercial utilization therefore still awaits future improvements and demands (Finding of Fact 62, R. 48–49). We except to this finding for the reasons stated later in our brief.

Based on these findings, the Special Master concludes that the Great Salt Lake was, at the date of its statehood and in its natural state, "navigable" for State title purposes (Finding of Fact 31 and Conclusion of Law 14, R. 29, 52). It would follow from that finding that title to the bed of the Great Salt Lake had vested in Utah at statehood and thus

[5] But see Appendix B to the Master's report.

that Utah is not required to pay the United States any compensation for the latter's conveyance of the Lake bed to Utah pursuant to the Act of June 3, 1966 (Conclusions of Law 15, 18, and Proposed Decree, R. 52–54).

SUMMARY OF ARGUMENT

To prevail in this litigation, Utah must establish that at the time of its admission into the Union the Great Salt Lake, in its natural state, was "navigable in fact." For state title purposes, that phrase includes only lakes and rivers which "are used, or are susceptible of being used, in their ordinary conditions, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water." *The Daniel Ball,* 10 Wall. 557, 563. The Lake has not at any time actually been used for the relevant kind of commercial trade or travel. And it is not "susceptible" of commercial use in its ordinary condition; its shallowness, the extreme difficulty of access to it, its gradual shelving, the total desolation of its shoreline and surroundings, are physical features which preclude its use as a highway of commerce. The essentially undisputed facts, we submit, lead to the conclusion that at the time of Utah's statehood the Great Salt Lake was not navigable in fact.

We further submit that the Special Master gave undue weight to the physical capacity of the Lake to float commercial water craft. While this factor is essential, it is not of itself sufficient. The determinative issue is whether the waterway is, or is susceptible of

being, a highway of commerce. The physical features of the Lake and its environs preclude its use as a highway of commerce, even though commercial craft could float on the Lake. And the uses cited by the Master as showing commercial utilization of the Lake are not uses of the relevant kind and do not show practical usefulness of the Lake to the public as a commercial highway. Under the proper standards, the Lake was not navigable in fact at the pertinent time and the Master's contrary conclusion should not stand.

Nor is the Lake navigable in law, since it has no interstate or foreign connection and thus is not a channel of interstate or foreign commerce. At common law, only tidal waters were navigable. This principle was found to be unsuitable as applied to the great rivers and inland lakes of this country; accordingly, such waters were held to be navigable in law, if navigable in fact, even though above tide water. But in every instance—with but one exception of which we are aware—the "American" rule was invoked only with respect to the great waterways which constituted a part of a highway of interstate or foreign commerce. Indeed, this is an essential element of the navigability concept for federal admiralty and Commerce Clause purposes. We submit that for state title purposes, too, the extension of the common-law rule should be limited to waterways which are channels in interstate or foreign commerce, and that since the Great Salt Lake does not meet this requirement, it is not navigable in law.

413-348—71——3

ARGUMENT

I. GOVERNING LEGAL PRINCIPLES WITH RESPECT TO NAVIGABILITY IN FACT

Two propositions set the framework for the consideration of the navigability of the Great Salt Lake. The first is that the burden of proof is on the proponent of navigability—here, Utah. See *Harrison* v. *Fite*, 148 Fed. 781, 785 (C.A. 8); *Iowa-Wisconsin Bridge Co.* v. *United States*, 84 F. Supp. 852, 867 (Ct. Cls.). The second proposition is that "[n]avigability, when asserted as the basis of a right arising under the Constitution of the United States, is necessarily a question of federal law to be determined according to the general rule recognized and applied in the federal courts." *United States* v. *Holt Bank*, 270 U.S. 49, 55–56. *See also Brewer-Elliott Oil and Gas Co.* v. *United States*, 260 U.S. 77, 87; *United States* v. *Utah*, 283 U.S. 64, 75; *United States* v. *Oregon*, 295 U.S. 1, 14. It follows that the decisions of the Supreme Court of Utah taking judicial notice of the navigability of Great Salt Lake[6] cannot be deemed to have established the Lake's navigability for our purposes. The question is, rather, whether the State of Utah, in the recent proceedings before the Special Master, has succeeded in showing that Great Salt Lake is a navigable body of water according to the rules recognized and applied in federal courts.

At the outset, it is useful to restate how the issue of navigability arises in this case. Utah's claim to the bed of the Great Salt Lake ultimately rests upon the proposition that these lands passed to the State upon

[6] *Robinson* v. *Thomas*, 75 Utah 446, 286 Pac. 625; *Deseret Livestock Co.* v. *State*, 110 Utah 239, 171 P. 2d 401.

its admission to the Union. This results, it is said, from the operation of the "equal footing" principle which, as construed in *Pollard's Lessee* v. *Hagan*, 3 How. 212, and subsequent cases, requires that the newly admitted States be accorded the same property interest in submerged lands as was enjoyed by the thirteen original States as successors to the rights of the British Crown. The governing notion was that the principal highways of water commerce—which in England are the tidal rivers—ought to be treated as public assets, immune from the claims of private landowners. The overriding reason for keeping the beds out of private ownership was—and is—to prevent interference with the free use of navigable waters as commercial highways. See *Barney* v. *Keokuk*, 94 U.S. 324, 338.

The common law conceded to the English Crown only the beds of navigable *tidal* waters, which were of course arms of the sea, subject to the jurisdiction of the Admiralty, and arteries of foreign commerce. This equation of navigability with tidewater was early found ill-suited to the geography of America, and rejected, both as a restriction on the federal admiralty jurisdiction (see *The Propeller Genesee Chief* v. *Fitzhugh*, 12 How. 443, 454–459), and as a test of navigability for property purposes as well (*Barney* v. *Keokuk*, *supra*, 94 U.S. at 337–338). But the relationship to commercial use remained. Under the Federal law that emerged, only those waterways on which, in the words of *Genesee Chief*, "commerce is carried on between different states or nations," were considered to be navigable.

The classic definition of navigable waters occurs in *The Daniel Ball*, 10 Wall. 557, 563:

> Those waters must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary conditions, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water. * * *

Although that was a case construing the commerce clause, the definition just quoted is almost invariably cited in both admiralty cases (*e.g., In re Garnett*, 141 U.S. 1, 15), and cases involving State title (*e.g., United States* v. *Utah, supra*, 283 U.S. at 76).

What *The Daniel Ball* teaches is that navigability in fact, in federal law, is more than ability to float a vessel. A body of water is navigable in fact only if, in its natural condition, it is useable as a "commercial highway."[7] The last expression carries several relevant implications:

> (1) That the movement is a purposeful aspect of the flow of goods or passengers from one point to another, rather than, say, the aimless cruising of pleasure boats or even the

[7] The "commercial highway" requirement in admiralty and commerce clause contexts embodies a legal as well as a factual element: the waters not only must be navigable in fact, but also must form part of a highway *in interstate or foreign commerce*. See *The Daniel Ball*, 10 Wallace 557, 563; *The Montello*, 11 Wall. 411, 415; *Moore* v. *American Transp. Co.*, 24 How. 1, 39; 33 U.S.C. 2.10-5(a). We argue below, pp. 29–34, that both elements must be satisfied for state title purposes, and that even if the Great Salt Lake meets all other tests, it is nonnavigable because it has no interstate or foreign link.

scheduled round trips of a sightseeing or excursion vessel;

(2) That the commerce involved is, at least potentially, of substantial volume and frequency;

(3) That the use of the body of water for transporting goods or people is practical, including, presumably, physical possibility and economic feasibility.

These characteristics have been listed as ingredients of navigability in all contexts. But, whatever the appropriateness of demanding so much to establish admiralty jurisdiction, or congressional power under the commerce clause, it is clear that these are the enduring criteria of navigability in connection with determining a state claim to the bed of an inland lake or river. Thus, a navigable body of water in this sense has been defined as a waterway which has "capacity for practical and beneficial use in commerce" (*Oklahoma* v. *Texas*, 258 U.S 574, 591), or, more directly, "as a channel for useful commerce." *Brewer-Elliott Oil and Gas Co.* v. *United States, supra*, 260 U.S. at 86; *United States* v. *Holt Bank, supra*, 270 U.S. at 56; *United States* v. *Utah, supra*, 283 U.S. at 76. The matter is well stated in the landmark opinion in *Harrison* v. *Fite*, 148 Fed. 781, 783 (C.A. 8), approvingly cited by this Court in several decisions (*e.g., Oklahoma* v. *Texas, supra*, 258 U.S. at 591; *United States* v. *Oregon, supra*, 295 U.S. 23):

> To meet the test of navigability as understood in the American law a water course should be susceptible of use for purposes of commerce or possess a capacity for valuable

> floatage in the transportation to market of the products of the country through which it runs. It should be of practical usefulness to the public as a public highway in its natural state and without the aid of artificial means. A theoretical or potential navigability, or one that is temporary, precarious, and unprofitable, is not sufficient. While the navigable quality of a water course need not be continuous, yet it should continue long enough to be useful and valuable in transportation; and the fluctuations should come regularly with the seasons, so that the period of navigability may be depended upon. Mere depth of water, without profitable utility, will not render a water course navigable in the legal sense, so as to subject it to public servitude, nor will the fact that it is sufficient for pleasure boating or to enable hunters or fishermen to float their skiffs or canoes. To be navigable, a water course must have a useful capacity as a public highway of transportation. * * *

One aspect of the test of navigability is unique to the state title context: that is the *time* when the water course must be navigable. The time is *not* the present, as it is for the purpose of admiralty jurisdiction. See *The Robert W. Parsons*, 191 U.S. 17, 28. Nor may we follow the generous test applicable to the exercise of congressional powers under the commerce clause, which treats as subject to regulation waters which were once navigable but are no longer (*e.g., Economy Light Co.* v. *United States*, 256 U.S. 113, 123–124), or which only recently have become passable (*e.g., Philadelphia Light Co.* v. *Stimson*,

223 U.S. 605, 634–635), and also, streams which are not now, and never have been, navigable, but may become so in the future by improvements (*e.g., United States* v. *Appalachian Power Co.*, 311 U.S. 377, 409; and see 33 U.S.C. 2.10–5).[8] For the purpose of determining a state claim to water bottoms, the inquiry as to navigability is limited to the condition of the waters on the date of the State's admission to the Union; all else is irrelevant. *Shively* v. *Bowlby*, 152 U.S. 1, 18, 26; *Oklahoma* v. *Texas*, *supra*, 258 U.S. at 591, 594; *United States* v. *Utah*, *supra*, 283 U.S. at 75; *United States* v. *Oregon*, *supra*, 295 U.S. at 14; see *United States* v. *Applachian Power Co.*, *supra*, 311 U.S. at 408.

An important corollary of the rule that navigability must be shown at statehood, not at some future time, is that the water course should be judged in its natural state. Future improvements that would remove obstacles to commerce or otherwise improve navigability are not relevant. *United States* v. *Oregon*, *supra*, 295 U.S. at 23; *Brewer-Elliott Oil and Gas Co.* v. *United States*, *supra*, 260 U.S. at 86; *Oklahoma* v. *Texas*, *supra*, 258 U.S. at 586, 588, 591.

This is not to say that actual use of the river or

[8] To the extent the commerce clause confers authority over waters tributary to navigable waters, or which could be made navigable only by improvement, it is no longer tied to the "ordinary conditions" language of *The Daniel Ball*, *supra*. But the potential for exercise by the federal government of jurisdiction over an interstate stream or tributary under the commerce clause does not result in the vesting in the State of title to the bed of that stream. Cf. *Oklahoma* v. *Texas*, *supra;* and pp. 22, 31 and n. 14, *infra*.

lake as an artery of commerce at the date of the State's admission is essential. As said in *United States* v. *Utah, supra,* 283 U.S. at 82, "where conditions of exploration and settlement explain the infrequency or limited nature of such use, the susceptibility to use as a highway of commerce may still be satisfactorily proved." Thus, one may judge navigability by assuming a natural development of the area and considering whether the stream or lake, given its geographic setting, its dimensions and direction, will likely become a commercial highway. But the potential of a water course as an artery of commerce may appear lacking from the beginning, despite its ability to float a large vessel. And subsequent history will often be relevant to ratify that judgment.

II. THE GREAT SALT LAKE IS NOT NAVIGABLE IN FACT

The Special Master's findings, we submit, will not support a conclusion that the Great Salt Lake, at the time of Utah's admission to the Union in 1896, was navigable in fact—a phrase encompassing only those waters which "are used, or are susceptible of being used, *in their ordinary conditions,* as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water." *The Daniel Ball, supra,* 10 Wall. at 563 (emphasis added). The Special Master found that various types of boats had used the Lake in pursuit of various activities, both before and after statehood (Findings of Fact 47 and 48, R. 42–43). But

the activities did not involve use of the Lake "as highways for commerce." Instead, as the Special Master concluded (Finding of Fact 51, R. 43), "the boating uses of the Lake have been more of a private nature rather than by independent contractors for hire."[9] And these uses are not sufficient to determine the question here in issue—whether the lake is navigable in fact.

Of course, the Lake might nevertheless be deemed navigable if, at statehood, it was "susceptible" of commercial use. In this regard, the feasibility of future artificial improvements to the water course—or indeed, the predictability of natural changes—is *not* to be taken into account in assessing navigability for the purpose of a state claim to submerged lands. The controlling principle is that actual navigation at statehood need not be shown if the water course, in its then state, was susceptible of commercial navigation but

[9] The Master qualifies this finding by "[n]ot counting excursion trips." Excursion uses were quite properly excluded from consideration. To be a highway of trade and travel, a body of water ought to lead somewhere, and lend itself to being used by traffic to get from one end to the other. A boat which ventures forth on a 2,000 square mile body of water for a brief period of time, and then, without having in the interim discharged freight or passengers, returns to the place from which it started, cannot be said to have been engaged in "useful commerce", or to have demonstrated the Lake's "useful capacity as a public highway of transportation." If the existence on a body of water of excursion boats, or any boats hired for pleasure, could be construed to establish the navigability of that body of water, then the lake in the Public Garden in Boston, plied regularly in the summer by a fleet of small boats, would be a navigable body of water, as would countless other small ponds in parks throughout the country.

was not yet so used because of prevailing "conditions of exploration and settlement." *United States* v. *Utah*, *supra*, 283 U.S. at 82.

At the outset, exception must be taken to the Master's Finding of Fact 62 (R. 48–49): "While commerce and trade, unless pleasure boating be considered as such, has not flourished on the Lake, this is so not because, as the Government contends, the drawbacks and obstacles are too formidable, but rather, as the State maintains, *the need, strong enough to overcome them,* has not arisen and commercial utilization on a large scale still awaits *future improvements and demands.*" (Emphasis added.) This assertion does not serve to demonstrate the Lake's navigability, since even admittedly non-navigable waterways can be commercially utilized, given the "demand" and "future improvements." This finding, rather, shows that commercial use of the Lake has not occurred because of existing obstacles; and practically viewed, these obstacles even now preclude use of the Lake as a highway for commerce, and did so at the time of statehood.

Moreover, it is doubtful if the "susceptibility" rule is applicable here at all. The Lake was discovered (1824–1825) more than 70 years before the date of Utah's statehood (Finding of Fact 1, R. 9) and settlement of the area had largely occurred by that time (Finding of Fact 19, R. 21). In such circumstances, it is plain that the limited use of the Lake before and at the time of statehood cannot be attributed to the undeveloped character of the area. And the history of the Lake since 1896 sufficiently shows that time has not

turned it into a useful commercial highway. The fact is that the Great Salt Lake is not now and has never been "susceptible" of filling that role.

In any event, we submit that under the facts as found by the Master the Great Salt Lake is not "susceptible" to use as a highway of commerce. Undoubtedly, it is the physical situation of the Lake which is chiefly responsible for the insignificant use made of the Lake over the last 145 years. The Lake is a residue of an ancient sea, and occupies a shallow depression in the otherwise remarkably flat plain which once was the bed of that sea. It is the drain for a great area, the Lake itself having no outlet. When the surface of the Lake is at 4,195 feet above sea level, the maximum depth of the Lake is about 25 feet; the *average* depth of the Lake, however, because of the gradual slope of its shores, is much less. Thus, all around that portion of this great flat basin covered by the waters of the Lake stretch huge expanses of smooth, flat, salt-impregnated lands not covered by the waters of the Lake. And the flatness and shallowness of this closed basin (that is, a basin without an outlet) make the shores of the lake extraordinarily desolate, and access to the Lake extremely difficult—conditions which existed at the time of statehood and for many years before.

Indeed, present circumstances illustrate how well the Lake's encircling bogs, marshes, and flats fend off intruders. Except for a town (Lakeside) inhabited only to maintain railroad tracks in the area, there are no settlements or communities of any kind immedi-

ately bordering on the Lake. In fact—and again with the exception of Lakeside—there are absolutely no communities at all anywhere near the western and northern shores of the Lake. And even along the southern and eastern shores of the Lake, there are no settlements immediately adjacent to the water: all of the centers of habitation here are separated from the Lake by from four to twenty miles of bogs, marshes, and flats.

It is unusually difficult to get boats from dry land across the boggy marshes into floatable water. This is but one aspect, although in this case a very important aspect, of the general inaccessibility of the Lake resulting from the flatness and gradual shelving of the basin in which it is located. And in consequence of the physical situation of the Lake—its being in a closed basin, without an outlet—the level of the Lake is subject to marked, although gradual, fluctuation. Since the basin in which the Lake is located is so flat, the fluctuations in the level of the Lake result in the covering or uncovering of large areas of lands, a condition which further thwarts use of the Lake.

In fine: the shallowness of the Lake, the difficulty of access to it, the great distances from the far water line of the Lake to depths capable of floating a boat, the inhospitable nature of the great bogs, marshes, and salt flats surrounding the Lake, the desolateness of the immediate environs of the Lake, are physical features of the Lake which negative its susceptibility to use as a highway of commerce; these physical features, coupled with the facts that there are no communities

along the shores of the Lake, and that in the 145 years that people have been living near the Lake, it has been but sparsely used, there having been no true commercial use of the Lake at any time; all this compels the conclusion that the Lake, as a matter of fact, was not navigable at the time of the admission of Utah into the Union.

III. EXCEPTIONS TO THE MASTER'S FINDINGS OF FACT AND CONCLUSIONS OF LAW WITH RESPECT TO THE LAKE'S NAVIGABILITY IN FACT

The Master declares (Conclusion of Law 5, R. 50) that the "test [for determining navigability] is one of fact regarding the capacity or susceptibility of the waters in their natural state, or ordinary condition, of being used, as the need may arise, by the then customary modes of trade and travel for useful commerce." [10] Next it is said that "capacity" for navigability may be shown by actual use at the critical time; physical characteristics of the body of water; actual uses at any time, if such uses could have been conducted at the critical time on the Lake in its natural state; and experimentation (Conclusion of Law 6, R. 50–51). The Lake's physical capacity to carry water transportation is detailed in Finding of Fact 31, R. 29, and we concede that indeed commercial water craft could *float* on the Lake. Actual commercial utilization of the

[10] We submit that while the setting against which "navigability" is to be assayed certainly involves fact finding, yet the ultimate conclusion whether the facts as found show "navigability" presents a question of law. Finding of Fact 31, accordingly, is more properly treated as a conclusion of law.

Lake is found in the use of boats by their owners to carry livestock and supplies to and from islands in the Lake and to haul guano from other islands (Conclusion of Law 7, R. 51); the use of boats for construction and maintenance of railroad trestles and causeways, for exploration and scientific study, and for police patrol and rescue activities (Conclusion of Law 8, R. 51); and recreational and pleasure boating (Conclusion of Law 9, R. 51). From this it is concluded that Great Salt Lake was "navigable" at the date of statehood (Finding of Fact 31, R. 29; Conclusion of Law 14, R. 52). And it thus follows that the bed of the Lake is owned by Utah (Conclusions of Law 15–18, R. 52). The Master's proposed decree (R. 53–54) accordingly grants Utah the relief it seeks.

In his statement and application of the "test" of navigability in fact, the Master has placed undue reliance on the physical *capacity* of the Lake to float commercial water craft.[11] While surely significant, this factor is by no means controlling; rather the appropriate measure is whether the waterway is, or in its natural state is susceptible of being, a highway of commerce. And this measure is satisfied only when: (1) the "commerce" on the waterway involves (or, in the water-

[11] Thus in Finding of Fact 31, R. 29, the Master states that his finding that the Lake was "navigable" at statehood is based on the following:

"(a) On January 4, 1896, the Lake was 30.2 feet deep or 4200.2 feet above sea level.

"(b) As of that date, the Lake was physically capable of being used in its ordinary condition as a highway for floating and affording passage to water craft in the manner over

way's natural state, is capable of involving) the flow of goods and passengers from one point to another; (2) that commerce is, at least potentially, of substantial volume and frequency; and (3) the use of the waterway for such commerce is practical, so as to be both physically possible and economically feasible.

The hauling of livestock, supplies, and guano to and from the Lake's islands is not commercial use of the relevant kind. The boats used here belonged to the owners of the livestock or the guano; thus the hauling was done, not by a carrier for the purpose of making money by the act of carriage, but by a person or organization whose business was ranching or production of guano and for whom the carriage was only one step in an operation centering on the use of the Lake, not as a highway for trade and travel in their customary modes on water, but as an obstacle to be crossed. In other words, the business of the boats was ranching or guano production, not carrying waterborne freight;

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which trade and travel was or might be conducted in the customary modes of travel on water at that time.

"(c) If the need should have arisen on January 4, 1896, the Lake could have floated and afforded passage to large boats, barges and similar craft currently in general use on inland navigable bodies of water in the United States.

"(d) The areas of the Lake which had a depth sufficient for the purposes in sub-paragraphs (b) and (c) above were not narrow or short channels, but were several miles wide, extending substantially through the length and width of the Lake, and covered an area of more than 1,000 square miles. A vessel could have traveled almost in a straight line from Monument Point located on the northwestern tip of the Lake to a point, where Silver Sand Beach is now located, at the southern edge."

the boats were sustained on the Lake from the proceeds of the ranching or guano production operation, not from their profits as carriers.

This may, perhaps, be deemed an unimportant distinction; it could be argued that whether a boat used to haul stock is owned by the rancher himself, or by some party whose business it is to haul stock, makes no difference. But there is, we suggest, a critical distinction. The actual situation is that the carriage described served the needs only of the limited number of people who owned the business operations, in connection with which such carriage was conducted. The Lake is an obstacle which, perforce, they must overcome. This, we submit, hardly demonstrates that the Lake has a practical usefulness to the public as a commercial highway.

Likewise, the fleets of boats which twice came on the Lake, not to engage in trade or travel, but to construct a railroad trestle and a solid landfill causeway across its waters, do not show practical usefulness. While on the Lake, these vessels were not instruments of commerce in the customary modes of trade or travel on water; they were construction equipment. After their work was completed, the steamboats, tugboats, and barges, aside from a few craft which continued to be used for regular inspection checks of the trestle and causeway, all left the Lake, for there was no traffic or other activity on the Lake requiring their presence.

The boats engaged in exploration or scientific study of the Lake are no more indicative or probative of

the utility of the Lake for trade or travel than are the Apollo expeditions to the moon proof of the existence today of interplanetary commerce. And of course the police patrol and rescue activities do not involve "commerce." Boating for recreational and pleasure purposes is similarly inapposite, since such uses do not involve trade or travel in the sense here pertinent.[12]

The actual uses cited by the Master are thus insufficient to show that the Great Salt Lake was navigable in fact on the date of Utah's admission to the Union. As we have shown, at that time the Lake was not, in its natural state, susceptible to practical commercial use. We thus contend that, measured by the proper yardstick, the Lake cannot be said to have been navigable in fact at the critical time, and the Master's conclusion to the contrary should not stand.

IV. THE GREAT SALT LAKE IS NOT NAVIGABLE IN LAW FOR STATE TITLE PURPOSES BECAUSE IT HAS NO INTERSTATE OR FOREIGN CONNECTION

The test of navigability for purposes of federal admiralty jurisdiction and commerce regulation embodies two elements: the waterway must be navigable in fact; and it must also form a part of a highway in interstate or foreign commerce. Our contention, which is supported by historical analysis, is that the same dual test must be satisfied for state title purposes. Thus even if the Great Salt Lake were found navigable in fact, it is

[12] The same would apply equally to excursion craft, if such are within the uses described in Conclusion of Law 9, R. 51. But see n. 9, *supra*.

not navigable in law because it has no interstate or foreign connection.

We have found no decision of this Court holding that in the state title area the interstate or foreign highway requirement also must be satisfied. Indeed, there are suggestions, by way of dicta, in several of the Court's opinions that this requirement need not be met to establish navigability for state title purposes (*e.g., United States* v. *Oregon, supra,* 295 U.S. at 14); and in one instance the Court sustained state title to portions of the bed of an interstate river system which were navigable-in-fact only intrastate, although without discussion of the question here raised (*United States* v. *Utah, supra,* 283 U.S. at 75). But because in our view the Court has not provided a clear-cut answer to this question, and because a historical analysis supports the argument here advanced, we submit that the interstate or foreign highway requirement applies with equal force to the state title area and must be met before a waterway may be deemed "navigable" for that purpose.[13] In view of our argument on this point, we except to the Special Master's ruling in Conclusion of Law 10 (R. 51) that navigability for state title purposes may be established even though the waterway in question "is not capable for use for navigation in interstate or foreign commerce."

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[13] We reserved and did not urge this point before the Special Master (Brief of the United States With Respect to the Navigability of the Great Salt Lake, p. 9) because of our judgment that only this Court should be requested to consider this issue in view of the opinions in *United States* v. *Oregon, supra,* and *United States* v. *Utah, supra.*

To begin with, the Great Salt Lake lies entirely within the State of Utah (Finding of Fact 5, R. 10). And the Lake has no navigable connection beyond Utah; although one of its tributaries, the Bear River, flows through Wyoming and Idaho before reaching the Lake, and vessels have traveled from the Lake a short way up and down the Bear, yet this stream does not provide water passage to any point outside Utah (Findings of Fact 12 and 24, R. 17, 24.[14] Since the territorial boundaries were never less extensive than the present state boundaries, these conditions have existed throughout the known history of the Lake. Thus if the rule which we here assert is applicable for State title purposes, the undisputed facts preclude a finding that the Lake was "navigable" at the time of statehood.

State ownership of lands underlying waterways within their boundaries derives from the soverign rights of the English Crown, to which the States succeeded, directly in the case of the original thirteen States, *Martin* v. *Waddell*, 16 Pet. 367, 410, 416, and under the equal-footing principle in the case of subsequently-admitted States, *Pollard's Lessee* v. *Hagan*, *supra*. Under English common law principles, the Crown owned only the beds of *tidal* waters—that is, waters within the ebb and flow of the ocean's tides. The governing precept was that the principal highways of water commerce should be treated as public assets and

[14] We note that the Bear might nonetheless be subject to regulation for commerce clause purposes if it were found that improvements could render it navigable interstate. See pp. 18–19, and n. 8.

immune from private ownership, so as to prevent interference with free use of those waters as commercial highways. But even though a waterway was substantial in size and plainly susceptible to commercial use, at common law its bed was not subject to public ownership by the Crown if it was non-tidal. See *Hardin v. Jordan,* 140 U.S. 371, 391–392; *Johnston* v. *O'Neill,* 105 Law Times Rep. 587, 597 (House of Lords, 1911).

The common-law rule that only tidal waters could be navigable—irrespective of navigability in fact—was both stated as and held to be the applicable rule for American law purposes in all early cases. *E.g., The Steamboat Orleans,* 11 Pet. 175, 182–183; *The Steamboat Thomas Jefferson,* 10 Wheat. 428. This Court soon concluded, however, that public control and ownership of the great rivers and inland lakes in this country was essential to effect the policy behind the common-law rule—to protect free use and public regulation of these waterways as commercial highways. See *Barney* v. *Keokuk, supra,* 94 U.S. at 337–338; *The Propeller Genesee Chief v. Fitzhugh, supra,* 12 How. at 454–459. But this admitted departure from the commonlaw rule was, until the *Utah* case, sanctioned only for the nation's great rivers and inland seas, which plainly constitute channels of interstate or foreign commerce and with respect to which the reasons undergirding the common-law rule are equally applicable. See *Illinois Central R. Co.* v. *Illinois,* 146 U.S. 387, 435–436; *The Propeller Genesee Chief* v. *Fitzhugh, supra,* 12 How. at 453–454; *The Montello,* 11 Wall. 411, 415.

Because Utah was a public land state, the federal

government originally held title to all lands within the territory, including the beds of both navigable and non-navigable waters. Most of this land was held in the government's proprietary capacity. Only land which the equal footing doctrine identified as an incident of state sovereignty, by analogy to the succession of the original states to the title of the Crown, was held "in trust" against the eventuality of Utah's admission to the Union as a state. *Pollard's Lessee* v. *Hagan, supra; Shively* v. *Bowlby, supra,* 152 U.S. at 26–28. All other lands remained in the federal government, unless expressly granted to the State by statute. For, except for what the equal footing doctrine required, they could not be made to pass by judicial construction. The Constitution reserves to Congress the "Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States." U.S. Const. Art. IV, Sec. 3, Cl. 2.

The title of the Crown, however, was limited to navigable, *tidal* waters. The strictest observance of the equal footing clause would have limited the title of new states to similar waters. In fact, despite an initial insistence that the extension of federal commerce and admiralty authority to inland waters was made because property rights were *not* involved, *The Propeller Genesee Chief* v. *Fitzhugh, supra,* 12 How. at 458, the Court extended the doctrine of state ownership to all waters navigable under the early commerce and admiralty test—that is, to all navigable waterways which constituted part of an interstate highway of commerce. *Barney* v. *Keokuk, supra,* 94 U.S. at 338.

There is no need to consider whether that holding was mistaken, since Congress subsequently ratified it by passage of the Submerged Lands Act of 1953, 67 Stat. 29, 43 U.S.C. 1301 *et seq.* In line with the original doctrine, however, that Act recognizes state title only to the beds of those bodies of water which were "navigable *under the laws of the United States* at the time such State became a member of the Union." 43 U.S.C. 1301(a) and 1311 (emphasis added). It recognizes no title to beds underlying *intrastate* waters, not navigable "under the laws of the United States." See *The Montello, supra; Poynter* v. *Chipman,* 32 Pac. 690 (Sup. Ct. of Utah, 1893); *In re Madsen's Petition,* 187 F.Supp. 411 (N.D. N.Y.); *Shogry* v. *Lewis,* 225 F.Supp. 741 (W.D. Pa); *Marine Office of America* v. *Manion,* 241 F.Supp. 621 (D. Mass.); *In re Builders Supply Co.,* 278 F.Supp. 254 (N.D. Ia). Title to the beds of bodies of water not navigable "under the laws of the United States"—i.e., which are not part of a highway of interstate or foreign commerce—did not pass from the United States to new states by reason of the equal footing doctrine. Since there is no other basis on which it might have passed, title to such lands, including the bed of the Great Salt Lake, remained in the United States.

CONCLUSION

For the reasons stated, it is respectfully submitted that on the date of Utah's statehood the Great Salt was not "navigable", either in law or in fact, and that therefore appropriate modifications should be

made in the relevant Findings of Fact and Conclusions of Law and in the Proposed Decree contained in the Special Master's Report.

Respectfully submitted.

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